APPENDIX H

Tnu and SEC Surveys

APPENDIX H-1

SEC SURVEY DATA

The following two surveys were used as verification surveys for the sump and drainlines in the Area 12 stairwell:

Survey No. 129RS97-0225 Bldg. 14/Area 12 sump floor and walls

Survey No. 129RS97-0226 Bldg. 14/Area 12 sump floor and walls

APPENDIX H-2

TNu SURVEY DATA

The following delineation and verification surveys were used by TNu to support the remedial action performed in Area 20A-East in 1996.

Survey No. 129DT032 Building 14, drainpipe

Survey No.129DT033 Building 14 floors, trench

Survey No. 12900457 Building 14, trench

Survey No. 12900467 Building 14, trench

Survey No. 12900468 Building 14, floors

Survey No. 12900479 Building 14, overheads

Survey No. 12900480 Building 14, walls

*DEC 04 1997 FUSRAP DATA TRANSMITTAL

TO:	FRO	DM:	LAB NO.	
BECHTEL NATIONAL, INC. FUSRAP PROJECT ENGINEERI	NG MANAGER	SEC	WORK ORDER NO.	SNY 97-0197
ATTN: LABORATORY LIAISON C/O FUSRAP PDCC	4 4	151 LAFAYETTE DRIVE P.O. BOX 350	DATE:	10/9/97
151 LAFAYETTE DRIVE OAK RIDGE, TN 37830		OAK RIDGE, TN 37830	SITE/WBS NO:	129
MAIL ADDRESS:	145	01-191-SC-550	AREA:	LINDE/
P.O. BOX 350 · OAK RIDGE, TN 37831-0350			DATA CODE:	RA-SURV
ITTH NO.	OFCORUNTIO			
ITEM NO:	DESCRIPTIO			
129 RA 970225	Building 14 Area 12	SUMP PUMP		
129 RA 970226	Building 14 Area 12	SUMP PUMP. PREVIOUS ELEVATED	SPOTS	

SUPPLIER DOCUMENT	STATUS STAMP	REVIEW COMMENTS
	FUSRAP	(B14, Ata12, Sump Pump)
BECHTEL NATIONAL, INC.	14501-191-SC-550	(B14, Area 12, Sump Pump) THIS AREA HAS BE RELEASED
1 DATA PACKAGE IS ACCEPT	ABLE	BY THE IVC.
2 REVISE AND RESUBMIT:		
ENTIRE PACKAGE		
APPLICABLE SECTIONS:		
EDD		
3 REVIEW NOT REQUIRED.		
REVIEWED BY:		
DMVS et 1,	DM	
In/si	+	
REVIEWED BY	DATE	

1		7. Survey Drawing/ Description/ Comments
	1. General Information Survey No. 97-0825 Page # 1 of 5	7. Survey Drawing/ Description/ Comments
		N :
	Date 9.23.97 Electronic File No. 12901740	114
	Site/WBS No.: LINDS//29	}
	Tech(s): C. Slemons	
	2. Item Surveyed Bldg 14 Area 12	1 N. Wall
	Sump Pump	
	30MP TOTAL	(4)
	1	
	3. Release Limits	
湖流	Radiological Contaminants: // hat	(3) Ploor (9)
	Action Limits: Removable: 1,000dpm100m7 otal: 5,000dpm100	
	Other:	
	Ref:	
	4. Survey BKG and Methods of Determination	
	Brakground established at location	
	of survey BACKBround was ret-renced	
	to file in N.P. office in Bldg 31	
	10 112 17 17.7. SAFICE IN 1519 31	
	•	
	5. Survey Type/ Data Codes	
	Routine Surveys (HS-MISC)	
	. Uncontrolled Area RA-SURV	
	Controlled Area	,
	: Sample Release to:	
	Equipment/Materials (HS-EQIP) Release to:	Areq was too wet to take counts with.
		Aleq who goo well to ight country.
		Took smears at every point. Entire Area was 100% By ScanED
	6 INSTRUMENTATION	WAS 100% BOSCANED
	# Scaler W/ Detector S/N w/ S/N CAL DUE w/ CAL DUE	
	L-2221/ 5.29.98/	
	1 /44-9 /57927 /7.7.98	
	2 1-2221/43-10 56986/ 56995 6.18.98/	
	ms-2/ 57575/ 4.10.98/	
	13 /HY-210 /57958 /4.9.98	
		SSHR Review: Phthu & Dale: 10-8-97
•	1	
	5	RSSS Review: 10.8.97
	propagagament of the control of the	/ 0

Survey No.	129RS97-0225	Page 2	of	5	Comments:	BLDG.	14 AREA 1	2 SUMP PUMP		
Date	9/23/97	Site/ WBS No.	LINDE\129		AREA WAS	TOO WET	TO TAKE	COUNTS ALPHA.	TOOK SMEARS AT EVERY	POINT.
Survey Tech(s):	SLEMONS, C.	Count Rm Tech	SLEMONS	S, C.	ENTIRE ARE	EA WAS 10	0% BETA/	GAMMA SCANNE	D.	

Survey Tech(s): SLEMON	vey Tech(s): SLEMONS, C. Count Rm Tech_SL		IONS, C)	ENTIRE	E AREA	WAS 10	00% BET	A/GAMN	MA SCANI	NED.				
Notes:									Tota	1			Remov	able	
Instr. No. = See Survey Coversheet	dose rt (u rem) = Direct Reading Instr.		Pai	ameters	dose rate	Gamma	Corr uR	Alph	a	Beta-Gar	nma	Alpha		Beta-Gar	mma
x = Corr. Coefficient	Gamma (cptm)		1/	nstr. No.			Alle E			#1 L2221 S	10294	#2 L2221 S	6986	#3 MS-2 S	7575
Yint = Y Intercept	corr urem (urem) = (cptm)(x) + Yint.			x			1147						1, 3		1.5
E = eff = cpm/dpm	Direct			Yint							Target St. Fr.				11 11 11
ACF = Area Correction Factor	Alpha (dpm) = (cpm - Bcpm)/(eff * ACF)			E	27 1 2					0.27		0.311		0.23	
t _B = Background Count Time	Beta (dpm) = (cpm - Bcpm)/(eff * ACF)		вкс**	Всрт **			he Video		· · · · · · · · · · · · · · · · · · ·	44	11155.	0.36		39.9	
t _S = Sample Count Time	Removable		<u> </u>	ACF	* # 14 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$ 8	VM (1.4			0,155		Spring.	r day d		
R _b = Bkgd count rate	Alpha (dpm) = (cpm - Bcpm)/ eff		<u> </u>	t _B				,	311111 - 1211 -		- 1 + 1 * 1 * 1 * 1 * 1 * 1 * 1 * 1 * 1 *	50		50	
**Bcpm = Background cpm = R _b	Beta (dpm) = (cpm - Bcpm)/ eff		ļ	ts		Villa di				 				1	
** Background determination criteria is	* dpm readings are per 100cm ²		 	L _c	3 \$8 - 1 - 11 mil	落物。				368.7		3.21		45.63	
found on the survey cover sheet			<u> </u>	MDC		Jeg ville y a		<u> </u>		809.2		16.06		104.30	
No.	Descriptions	×	У	Z	urem/uR	cptm	uR	срт	*dpm	срт	*dpm	срт	*dpm	cpm	*dpm
1 FLOOR				<u> </u>						170	3010.75	12	37 43	80	174.35
2 FLOOR			ļ	<u> </u>	<u> </u>					72	669,06	4	11.70	56	70.00
3 FLOOR			ļ	<u> </u>					<u> </u>	116	1720.43	9	27.78	64	104.78
4 FLOOR			ļ							81	884.11	3	8.49	47	30.87
5 FLOOR										294	5973.72	8	24.57	61	91.74
6 FLOOR										160	2771.80	1	2.06	40	0.43
7 WALL			<u> </u>	<u> </u>						54	238.95	0	-1.16	42	9.13
8 WALL				<u></u>						172	3058.54	2	5.27	35	-21.30
											:				
			1	· · · · · · · · · · · · · · · · · · ·											
			†												
									<u> </u>						
				 											
			-		<u> </u>						·				
. 1		l		1	1	I	I	L	1						

$$L_{c} = \frac{1.645 \sqrt{R_{b} \cdot t_{s}(1 + t_{s} / t_{B})}}{E * t_{s} * ACF}$$

MDC =
$$\frac{3 + 3.29 \sqrt{R_b \cdot t_s(1 + t_s / t_B)}}{E * t_s * ACF}$$

RSSS: DWD SSHR: Ru (INI)

4.34	1. General Information	7. Survey Drawing/ Description/ Comments
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	Survey No Page # 3 of 5	$\langle \lambda \rangle$
	Date 9.23.97 Electronic File No.	ΙΥ.
	Site/WBS No.: wos/129	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Tech(s): C. Slemons	· · · · · · · · · · · · · · · · · · ·
	2. Item Surveyed Bldg 14 Alea 12	
	Is now as to be a larger than the	
1	P	(9)
	Sump Pump	
		(19) (B) (U) (M) (T)
		wall -
	3. Release Limits	
	Radiological Contaminants: Unat	
	Action Limits: Removable: 1,000 dpm/100cTalal: 5,000 dpm/100	
	Other:	Floor
	Ref:	(a) (b)
	4. Survey BKG and Methods of Determination	
	BACKLEOUND ESTABLISHED AT LOCATION OF	
	SURVEY. BACKGROUND WAS REFERENCED TO FILE	
	WH.P. OF FICE IN 6LD6-31	
		(20) (3)
	5. Survey Type/ Data Codes	(25) (16)
	Rouline Surveys (HS-MISC) CH-SURV	
	Uncontrolled Area RA-SURV	(24)
:		J. Wall
	Controlled Area	
	Sample Release to:	
	Equipment/Materials (HS-EQIP) Release to:	
4.1		
1 390		Area was too well to USE melale.
	6 INSTRUMENTATION	Tooksmears at everypoint. Scanned Area
: 41	# Scaler W/ Detector S/N w/ S/N CAL DUE w/ CAL DUE	Area was too wet to use of meter. Tooksmears at everypoint. Scanned Area 100% with By detector.
н	56926/ 3.19.98/	
#41, 2011		
	4-2221/ 36986/ 61898/	
:	2 / 43-10 /56995 /6.18.98	
	hs=2 / S7575 / W:10:98/	
1	1.3 HP-210 /57958 14.9.98	
• • • • • • • • • • • • • • • • • • • •	4	SSHR Review: All Thurf Date: 10-8-97
•		
	5	RSSS Review: Trans NAD Date: 10.8.67
	phone in the second sec	ι \circ

Surve	ey No.	129RS97-)225	Page	4	of	5	-	Comme	nts:	BLDG.	14 AREA	A 12 SUN	IP PUMP					
Date		9/23/97		Site/ WBS	No.	LINDE	\129		AREA V	VAS TO	O WET	TO TAK	E COUN	TS ALPH	A. TOO	K SMEAF	RS AT E	VERY PO	DINT.
•	ey Tech(s):		s, C.	_Count Rm	Tech	SLEN	MONS, C).	ENTIRE	AREA	WAS 10	00% BET	A/GAMN	IA SCANI	NED.				
Notes	 S:												Total				Remov	able	
	= See Survey Co	versheet	dose rt (u rem)	= Direct Reading In:	str.		Pai	rameters	dose rate	Gamma	Corr uR	Alph	a	Beta-Gan	nma	Alpha		Beta-Gai	mma
	Coefficient		Gamma (cptm)	•			1	nstr. No.						#1 L2221 S	10294	#2 L2221 S	6986	#3 MS-2 S	7575
Yint = Y	Intercept		cott ntew (nte	m) = (cptm)(x) + Yin	it.			X	si rela		e (1)	31. ³³ . 15			No.		1 2 5		
E = eff =	cprn/dpm		Direct					Yint	`		·								
ACF = A	rea Correction Fac	tor	Alpha (dpm) =	(cpm - Bcpm)/(eff *	ACF)			E						0.22		0.311	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.23	
t _B = Ba	ckground Count Tir	ne	Beta (dpm) = (cpm - Bcpm)/(eff * A	ACF)		вкс**	Bcpm**						45	-	0.36		39.9	
t _s = sa	mple Count Time		Removable	2				ACF	, s f.;		71 81 AT.		<u> </u>	0.155			<i>II</i> ,		
$R_b = B$	kgd count rate			(cpm - Bcpm)/ eff				t _B							gum edishiya i	50	113 16 241	50	
•	≃ Background cpm			cpm - Bcpm)/ eff			ļ	$\frac{t_s}{t_s}$			i di mazi in la la La la	<u> </u>		457.0		1 2 24	· ·	1 45.00	· ·
	round determinatio		* dpm readings	are per 100cm²				L. MDC		ri inggasi Singgasiya		 		457.6 1003.3		3.21 16.06		45.63 104.30	
	on the survey cover		scriptions			х	<u> И</u>	z	urem/uR	cptm	uR		*dpm	cpm	*dpm	cpm	*dpm	cpm	*dpm
No. Q	WALL		scriptions			<u> </u>	 	1	urchran	Opan		opin	l april	313	7859.24	2	5.27	37	-12 61
	WALL					<u> </u>	†	 						71	762.46	3	8.49	45	22.17
	WALL		 											91	1348.97	1	2.06	48	35.22
	WALL													58	381.23	2	5.27	41	4.78
13	WALL													287	7096.77	3	8.49	52	52.61
14	WALL													103	1700.88	1	2.06	44	17.83
15	WALL													42	-87.98	2	5.27	54	61.30
16	WALL													248	5953.08	1	2.06	55	65.65
17	WALL			····										200	4545.45	6	18.14	57	74.35
18	WALL													154	3196.48	3	8.49	36	-16.96
19	WALL						ļ							176	3841.64	7	21.35	45	22.17
20	WALL						ļ							333	8445.75	4	11.70	55	65.65
21	WALL						ļ							99	1583.58	2	5.27	40	0.43
22	QC #21													95	1466.28	1	2.06	41	4.78
23	WALL													90	1319.65	3	8.49	42	9.13
24	WALL						<u> </u>							91	1348.97	1	2.06	33	-30.00
25	WALL													99	1583.58	0	-1.16	22	-77.83
	WALL						<u> </u>							167	3577.71	1	2.06	47	30.87
27	WALL													48	87.98	1,	2.06	42	9.13

$$L_{c} = \frac{1.645\sqrt{R_{b} \cdot t_{s}(1 + t_{s} / t_{B})}}{E * t_{s} * ACF}$$

MDC =
$$\frac{3 + 3.29 \sqrt{R_b \cdot t_s(1 + t_s / t_B)}}{E * t_s * ACF}$$

RSSS: DMD SSHR: R. (INI)

FUSRAP Survey Data Sheet

				Comments:	BLDG 14 AREA 12 SUMP PUMP	
Survey No	129RS97-0225	Page 5	of <u>5</u>			
	01 5140110 0	0 D T. ab	OLEMONO O			

Technician(s): SLEMONS, C. Count Rm Tech	SLE	MONS,	C.	-			Total Re						Removable		
No. Descriptions	х	у	z	urem/uR	cptm	uR	срт	*dpm	срт	*dpm	срт	*dpm	срт	*dpm	
28 WALL									180	3958.94	0	-1.16	38	-8.26	
29 WALL									49	117.30	0	-1.16	40	0.43	
30 QC #29									50	146.63	3	8.49	37	-12.61	
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$$L_{c} = \frac{1.645 \sqrt{R_{b} \cdot t_{r}(1 + t_{s} / t_{B})}}{E * t_{s} * ACF}$$

MDC=
$$\frac{3+3.29\sqrt{R_b \cdot t_r(1+t_s/t_B)}}{E*t_s*ACF}$$

RSSS: DWD SSHR: KINI)

Date 9-23.97 Site/WBS No. LINDE/129
Survey Tech(s): C.Slemons Count Rm Tech. C. Slemons

Notes:			128AM			SMITH	WEST THE		Total				Remov	able	•
Instr. No. = See Survey Coversheat	dose it (u rem) = Direct Reading Instr.		1	rameters		1	Cott uR	Alph	ıa	Bela-Gar	nma	Alpha		Bela-Ga	
x = Corr, Coefficient	Gamma (cplm)		11	nstr. No.			79 \$20,55%			#	7	F:) —	#3	3
Yint = Y Intercept	corr usem (usem) = (cplin)(x) + Yint.			Х				64.2° °	医衰弱性	٠	* -	-:" i		3,79. 2 3	ogest.
E = eff = cpm/dpm	Direct			Yint				. T I 2 3 1 18 13	Jaron S			: .	1975 Y.	المتعاطية والمتعارب	5.25 h
ACF = Area Correction Factor	Alpha (dpm) = (cpm - Bcpm)/(ell * ACF)			E:		٠.	1.00			0,		0,311	Augings of	0.23	
tn = Background Count Time	Beta (dpm) = (cpm - Bcpm)/(eff * ACF)		пкс••	ncpm**			1.000		Ky . *		4 : :.	0.36			1.4
Is = Sample Count Time	Removable			ACF			শগুরুছ		engini.	0.1	55	! -	g setter ex	<u> </u>	·"·
R _b = Dkgd count rate	Alpha (dpm) = (cpm - Bcpm)/ ell			(B					erthau.	17	nIN:	50 min		50 m11	
**Bcpm = Background cpm = R _b	Beta (dpm) = (cpm - Bcpm)/ ell			t _s			1 5 4				nIN.	1 min		Imn	100
•• Background determination criteria is	* dpm readings are per 100cm²			La			3.5 (1)			368			3 <i>5</i>	9,0	
found on the survey cover sheet			<u> </u>	MDC	5 1	7873	ે હેં કોર		egilig (el) e	809	. 2	10.9	<u>ک</u> :	31.1	11/24/5
No.	Descriptions	X	y	2	urenVuR	cplm	uR	срт	*dpm	срт	*dpm	срт	*dpm	срт	*dpi
1 Floor										170		12		80	
2 F/60r										72		4_		56	<u></u>
3 Ploor										116		9		64	
4 Ploor										81		3		47	
5 Floor			·]							294		8		(01	
6 F100r										160		j		40	
7 Wall			<u> </u>							54		0		42	·
1										172		2		3.5	
8 Wall			·							1.70					
															
		i 													
															
															
	.	-													
144.			<u></u>	<u> </u>											===

() - -	64	5 ~	R	٠.	fs((1	4.	15	7	(1)	
c.=.											

 $\frac{3+3.29\sqrt{R_b \cdot t_s(1+ts/ts)}}{E*ts*ACF}$ MDC =

RSSS: SSHR: (INI) (INI)

Date 9.23.97 Site/WBS No.
Survey Tech(s): C.Slemons

Notes:															
1 10100.							NEW WAY		Total	I			Remov	able	1
Instr. No. = See Survey Coversheet	dose it (utem) = Direct Reading Instr.		Pa	ramelers	dose rate	Gamma	Corr uR	Alpl	าอ	Bela-Ga	mma	Alpha		Bela-Ga	amma
x = Corr. Coefficient	Gamma (cplm)		T.	nstr. No.			14.14.4.5			TH.	/	H		TF:	3_
Yint = Y Intercept	corrugem (urem) = (cptm)(x) + Yint.		1				Section 1		s 40 + 50 g 50					3,77, 2.	*******
E = eff = cpm/dpm	Direct			Yint				1,,,,	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1				. 1 . 12	or a color	
ACF = Area Correction Factor	Alpha (dpm) = (cpm - Bcpm)/(eff * ACF)			E			·		· . ·	0.6	75	0.311	.* . v	0.23	2
tn = Background Count Time	Beta (dpm) = (cpm - Bcpm)/(ell * ACF)		пкс…	Ncpm**					1 16 (F. 17)		5	0.36	50 ST 189	39.9	
ts = Sample Count Time	Removable			ACF					430 g + \$10	0.1	5.5				- 4 :
R _b = Bkgd count rate	Alpha (dpm) = $(cpm - Bcpm)/eff$			t _n			· · ·				1N	50m1		50 mi	
**Bcpm = Background cpm = R ₆	Beta (dpm) = (cpm - Bcpm)/ ell			t _s					,		110	ImIN	1.3 18 19 18	1 min	<i>)</i>
** Background determination criteria is	* dpm readings are per 100cm ²			Le						36			35	9.0	
found on the survey cover sheet				MDC			ी सम्बद्धियाँ द		Helio, M.	800	1.2	10.9	9-	31.	1 25
No.	Descriptions	×	У	2	urenyuR	cplm	uR	срт	*dpin	срт	*dpm	срт	*dpm	срт	*dp
9 Wal			<u> </u>							3)3		2		37	
10										71		. 3		45	
11										91		J		48	
12										58		2		411	
13						120				287		3		52	
14										103	*****	1		44	
15								······································		42	~ ~	2		54.	1
16	······································									248		1		55	
17	· · · · · · · · · · · · · · · · · · ·	 -								200		6		57	
18										154		3		36	
19										176		7		45	ļ.—
20										333		И		55	
al v										99		a		40	
22 QC# 6	2									95		1		41	
23 W91										90		3		42	
24	ı									91				33	
25										99		0		22	
26 /										167		1		47	
27										48		7		42	

1.0	5.4	5 ~	\overline{R}	۶.	1,	(1	4-	1.5	1	10)
=	1,2	. r.	.*	15	*	1	\overline{c}	F			

 $MDC = \frac{3 + 3.29 \sqrt{R_b \cdot t_s(1 + t_s / t_b)}}{E * t_s * ACF}$

RSSS:	SSHR:	

	(INI)	(INI)

FUSRAP Survey Data Sheet

Survey No. Page 5 of 5

Comments:

echr	nician(s) Coslemons Descriptions Wall OCHAS	5nS	S					Total				Removable			
No.	Descriptions	l x	у	z	urem/uR	cptm	uR	срт	*dpm	срт	*dpm	срт	*dpm	срт	*dpm
281	Wall									180		0		38 40	
29	Wall									49		3		40	
30	OC#29									50		3		37	
									-						
				ļ											
					ļ										
															
		1.													
 -															
			<u> </u>		<u> </u>										<u> </u>

 $L_c' = \frac{1.645 \sqrt{R_b \cdot t_s(1 + t_s / t_s)}}{R * t_s * ACR}$

 $MDC = \frac{3 + 3.29 \sqrt{R_b \cdot t_t(1 + t_s / t_B)}}{E * t_s * ACF}$

RSSS: SSHR: (INI)

1. General Information	7. Survey Drawing/ Description/ Comments
Survey No <u>97-0226</u> Page # 1 of 2	
Date $9.24.97$ Electronic File No. 12901741	N. WALL
Site/WBS No.: LINDE//29	N. 1.
Tech(s): Custemons	
2. Item Surveyed Bldg 14 Area 12 Sump pump	CAPPED
Previous elevated spots	
3. Release Limits	C. WALL
Radiological Contaminants: Unat	
Action Limits: Removable: 1000 dem/100cm2 Total: 5000dem/100cm2	Plaor DV
Ref:	
A Survey BKG and Methods of Determination	
RACKGROUND CENTABULENED ESTABULENED AT	
LOCATION OF SURVEY, BACKGROUND WAS	
referenced to file in N.P. OFFICE, Bldg 31.	
	(4)
5. Survey Type/ Data Codes	
Routine Surveys (HS-MISC) CH-SURV	
Uncontrolled Area RA-SURV	S. WALL
Controlled Area	
Sample Release to:	
Equipment/Materials (HS-EQIP) Release to:	
6 INSTRUMENTATION	
# Scaler W/ Detector S/N w/ S/N CAL DUE w/ CAL DUE	
1 2-221/96M 510294/ 5.29.98/	
	1
2 43-10 36466/56995 6.18.98	Area has been released and down posted. CAPPED
ms-2/ 575/ 4.10.98/	Area has been released and down posted. CAPPED pipe leading behind N. WALL WILLBE DELT WITH AT A VATER DATE.
3 /HP-210 /57958 /4.9.98	
4	SSHR Review: Phth Date: 10-8-97
5	RSSS Review: The MD: Date: 10.8.97
	1001

OSKAP Survey	Data Officet													JA-NO	
Survey No.	Page Site/ WBS No	of	7	7.	Comme	nts:X	Aleq en in	WK	s too	wet a wa	For B	X) re.	roine naed	s, em	2AIS
	Site WBS No. D						unts.		•			-			
Votes:				C 525			1 17 17 17		Total				Remova	able	
nstr. No = See Survey Coversheet	dose rt (vrem) = Direct Reading Instr.		·	ameters	dose rate	Gamma	Corr uR	Alph		Beta-Ga	mma	Alpha		Beta-Gar	mma
= Corr. Coefficient	Gamma (cptm)			str. No.			3. Car.	->		邛	1	#2		TP.	3
int = Y Intercept	corr urem (urem) = (cptm)(x) + Yint.	1		x	G. CARRELL		A MATTE		RATE I	1 1 1 1 1 1 1	. I. Pakis	· · · · ·			
= eff = cpm/dpm	Direct			Yint	89 48 7 A		\$174,60	Y				10 54 72 14			
CF = Area Correction Factor	Alpha (dpm) = (cpm - Bcpm)/(elf * ACF)	ll ll		E	Lorina	Leffsjert. (1444		8.84W-1877	0.236	file; to the f	0.311	ify itrage it it.	0.238	
B = Background Count Time	Beta (dpm) = (cpm - Bcpm)/(eff * ACF)	1	вкс••	Bcpm **			1.			42		0.4		43	
s = Sample Count Time	Removable			ACF	: :	S. Salak	46000		घर झिंद न	12/55		35x 362 √	18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		िति हिंद
? _b = Bkgd count rate	Alpha (dpm) ≈ (cpm - Bcpm)/ eff.			t _B			W 70			InIN	to the second	500m) (\$\$40.4	50 mW	Company of the Compan
Bcpm = Background cpm = Rb	Beta (dpm) = (cpm - Bcpm)/ eff	1		ts			<i>्वेशक्रीचे</i>		સંજિલ્ફાઇ હક	ImiN		IMIV		IMIN	
Background determination criteria is	* dpm readings are per 100cm²			L c	THE SHAPE		. 45 B 25		144	412		0.669	3.22	9.06	this is a
found on the survey cover sheet				MDC			3000			906		10.98		30.7	1 1 2 2 2 2
No	Descriptions	x	y	z	urem∕uR	cplm	IJR	cpm	dpm	cpm	*dpm	срт	*dpm	cpm	*dpm
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2 E.WAL	.) -									187		1	_	39	
3 N. WAL	L CAPPED PIPE,							٠.		513	 	0		.37	-
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 $b_{c} = \frac{1.645 \sqrt{R_b \cdot t_s (1 + t_s / t_b)}}{E * t_s * ACF}$

MDC = $\frac{3 + 3.29 \sqrt{R_b \cdot t_s(1 + t_s / t_B)}}{E * t_s * ACF}$

RSSS: ____SSHR: ____

(INI)

(INI)

		•	

APPENDIX H-2

TNu SURVEY DATA

The following delineation and verification surveys were used by TNu to support the remedial action performed in Area 20A-East in 1996.

Survey No. 129DT032 Building 14, drainpipe

Survey No.129DT033 Building 14 floors, trench

Survey No. 12900457 Building 14, trench

Survey No. 12900467 Building 14, trench

Survey No. 12900468 Building 14, floors

Survey No. 12900479 Building 14, overheads

Survey No. 12900480 Building 14, walls

	,			

•
Direct Surface and
Transferable Contamination Survey

Reference No.: Survey No.:

> Data Code: Grid ID:

Survey Date:

Smears Counted By: Smear Count Date:

Description

No.

1 PIPE

2 PIPE 3 PIPE

4 PIPE

5 PIPE

6 PIPE

7 PIPE

Area: Survey By:

			Commonia. QO												
						DIRECT S	SURFACE				TRANSF	ERABLE	CONTAN	MOTTANI	
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ĺ			Serial No.:					S9970		. 4 <u>4</u> 2		····			
129	900975	XLS	Detector:				LL	JDLUM 44	-9						
1	129DT0	32	Serial No.:					S9141							
	CH-SUF		Cal Due Date:					03/14/97							
ARE	A 20A E	AST-F	Bkgd CPM:					53.0	•						
	BLDG.	14	Efficiency:					0.23							
1	K. TESC	H	Area Cor Fact:					0.155			N/A			N/A	
	10/17/9	6	Bkgd CT Time:	,				1				•			
			Smpl CT Time:					1			•				·
			Lc (DPM):	Ĺ				477						,	·
E (X)	N (y)	Ht. (z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV
-		0	•		•		337.0	7966	1086						
		1 FT.	*	!			334.0	7882	1082						
		2 FT.	*				243.0	5330	946						
		3 FT.	*				288.0	6592	1015						
		4 FT.	*				322.0	7546	1065						
		5 FT.	*				325.0	7630	1069						
		6 FT.	•				441.0	10884	1222						
		7 FT.	*				654.0	16858	1462						
		8 FT.	*				809.0	21206	1614		·				
		9 FT.	*		•		383.0	9257	1148		,				
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8	PIPE .	7 FT. *				654.0	16858	1462			
9	PIPE	8 FT. *	•			809.0	21206	1614			
10	PIPE	9 FT. *				383.0	9257	1148			
	PIPE	10 FT. *	•			1354.0	36494	2062			
	PIPE	11 FT. *	•	•		897.0	23675	1695			
	PIPE	12 FT.				1518.0	41094	2179			
	PIPE	13 FT *	•			858.0	22581	1659			
	PIPE	14 FT.	•			1355.0	36522	2063			
	PIPE	15 FT.	•			1070.0	28527	1842			
	PIPE	16 FT.	•		•	751.0	19579	1559			
	PIPE	17 FT. 1	•		 •	386.0	9341	1152			
	PIPE	18 FT.				1008.0	26788	1791			
	PIPE	19 FT.	•			103.0	1403	687			
	QC PIPE	19 FT.	•			99.0	1290				
					 1/4/	No					
					11.11						

Data Entered By and Date:

Reviewed By and Date(RSSS):

Reviewed By and Date (ORPO):_

FUSRAP Form X-17 (08/19/96) *DPM units per 100 cm2 Page 1 of 2

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Data Entered By and Date: Justo Minutes 10, 296 Reviewed By and Date(RSSS): [DLM] - 10.17.94

22 FT.

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24 PIPE

Reviewed By and Date (ORPO):

FUSRAP Form X-17 (08/19/96) *DPM units per 100 cm2 Page 2 of 2

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1	PIPE			0	*				77.0	673	627						
2	PIPE			1 FT.	*				111.0	1627	704						
3	PIPE			2 FT.	*				86.0	926	648						
	PIPE	-		3 FT.	*				94,0	1150	667						
	PIPE			4 FT.	*				68.0	<lc 421<="" td=""><td>605</td><td></td><td></td><td></td><td>•</td><td></td><td></td></lc>	605				•		
	PIPE			5 FT.	*				69.0	<lc 449<="" td=""><td>607</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	607						
7	PIPE			6 FT.	*				63.0	<lc 281<="" td=""><td>592</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	592						
	PIPE			7 FT.	*				67.0	<lc 393<="" td=""><td>602</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	602						
	PIPE			8 FT.	*				81.0	785	636						
	PIPE	-		9 FT.	*		-		86.0	926	648						
11	PIPE		-	10 FT.	*				82.0	813	639					-	
12	PIPE			11 FT.	*				90.0	1038	657						
13	PIPE			12 FT.	*				80.0	757	634				-		
14	PIPE			13 FT	*				103.0	1403	687						
15	PIPE			14 FT.	*				105.0	1459	691						
16	PIPE			15 FT.	*		· · · · · · · · · · · · · · · · · · ·		102.0	1374	684						
17	PIPE			16 FT.	*				92.0	1094	662						
18	PIPE			17 FT.	*				96.0	1206	671						
19	PIPE			18 FT.	*				85.0	898	646						
20	PIPE			19 FT.	*				42.0	<lc -309<="" td=""><td>536</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	536						
21	QC PIPE			19 FT.					46.0	<lc -196<="" td=""><td>547</td><td><u></u></td><td><u> </u></td><td></td><td><u></u></td><td></td><td></td></lc>	547	<u></u>	<u> </u>		<u></u>		

Data Entered By and Date:

Reviewed By and Date(RSSS):

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Reviewed By and Date (ORPO):____

FUSRAP Form X-17 (08/19/96)
*DPM units per 100 cm2
Page 1 of 2

	,							182
Comments: *QC #20 PIPE, PROBE FACI:		プログロスクリエヤ! ひとりむけばる V.	Т 1	1 ET INCOEMTS	LINARI E TO	ΤΔΚΕ Δ		SMEAL
Comments: "QC #20 PIPE, PROBE FACI.	J	Y, MURIZUN I AL READINGS A		I FI. MUREWIIS,	DIAMPER 10	101/10	TELLIVIACE	CHAITU

	•				Comments: *QC #	FZU PIPE, PI	ROBE FACI.	JP, HOI	KIZON I AL K	EADINGS A	AT LET. HAC	KEWI 13, UI	VABLE 10	AKE ALPIN	A IACIA DIAIL	ULF\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	V 1.9
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No.	Description .	E (x)	N (y)	Ht. (z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross . CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV
22	PIPE .			20 FT.	a				54.0	<lc 28<="" td=""><td>569</td><td>. ,</td><td></td><td></td><td></td><td></td><td></td></lc>	569	. ,					
23	PIPE			21 FT.	*			,	75.0	617	622			•			
24				22 FT.	*				67.0	<lc 393<="" td=""><td>602</td><td></td><td></td><td></td><td>L</td><td></td><td></td></lc>	602				L		

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viewed By and Date (ORPO):____

FUSRAP Form X-17 (08/19/96) *DPM units per 100 cm2 Page 2 of 2

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		, •				Comments: READ	INGS IN	#4.2% H#20	DIRECT	SURFACE	William I			TRANSFI	RABLE	CONTAM	INATION	
		Direct Surface	and										1					
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	ansic		IM VAUA	, Dur	, 03			Alpha		В	<u>eta-Gamn</u>	na	7 55 25 53 2 CANADA	Alpha	9430546986BB1	В	eta-Gamm	ia .
C-1911						Scaler Model: Serial No.:		NA		Lu,	dlum-2	(22)		##			1/1	
		Reference No.:	I I a VI	MOO!	71. \//	Serial No				1.1	59970 Lvm 4	14-9	at datest as earling	al alchedos de la cisco.	earblaich, it whali ne t da		_/	
J		Survey No.:	1/57	009° DTC	70. XL	Serial No.:)	LUG	59141	<u> </u>						
•		Data Code:	#	-30	PV	Cal Due Date:					3/14/91	L						
*	im a	1796 Grid ID:	Bld	G 14	- 4	Bkgd CPM:					53			······································				-
		Area:	AREA	20 A	EASt.	(A) Efficiency:			. ,		0.23		<u> </u>	N1/A	\		N/A	
1		Survey By: M. Tesch Survey Date: 10/17/94				Area Cor Fact:	/				0.155		- <u>-</u>	N/A	<i>}</i>		N/A	
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]	, " 51	Smears Counted By: Smear Count Date:			depth	Lc (DPM):							ļ					
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Data Entered By and Date:

*DPM units per 100 cm2

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V	Reference No.:	1290	00971	5.V/S	Detector:				Lu	odlum L	14-9	<u> </u>					
Ω	Survey No.:	129	Oto	3. <u>v/s</u> 32	Serial No.:					59141						$\overline{}$	
7	Data Code:	C#-	SUR	V	Cal Due Date:					3/14/9	1						\
<u> </u>	Grid ID:	BLd6	14		Bkgd CPM:					23							
_	Area:	ALEA	20 A	EASto	F Efficiency:	-				0-23						<u></u>	
4	Survey By:		ESUL		Area Cor Fact:					0.155			N/A			N/A	
+	Survey Date:		17/96		Bkgd CT Time:			7		i							
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	Smear Count Date:	Smear Count Date:															
No.	Description	E (x)	N ·	Ht. (z)	Field Noles	Gross CPM /	Smpl DPM*	STD DEV	Gross CPM	Smpl · DPM*	STD DEV	Gross CPM	Smpl DPM*	STO DEV	Gross CPM	Smpl DPM*	ST D DEV
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Data Entered By and Date:

FUSRAP Form X-17 (08/19/96)
*DPM units per 100 cm2

D . ID ID : (0000)

FUSRAP DATA TRANSMITTAL

D-25649

FROM: TMA/EBERLINE 151 LAFAYETTE DRIVE P.O. BOX 350 OAK RIDGE, TN 37830 NO.E- 19026

DATE 10-1-96

SITEMBS/ 139

AREA LIN

MAIL ADDRESS P.O. BOX 350 OAK RIDGE, TN

14501-191-SC-400

DATA CODE CH SUNU

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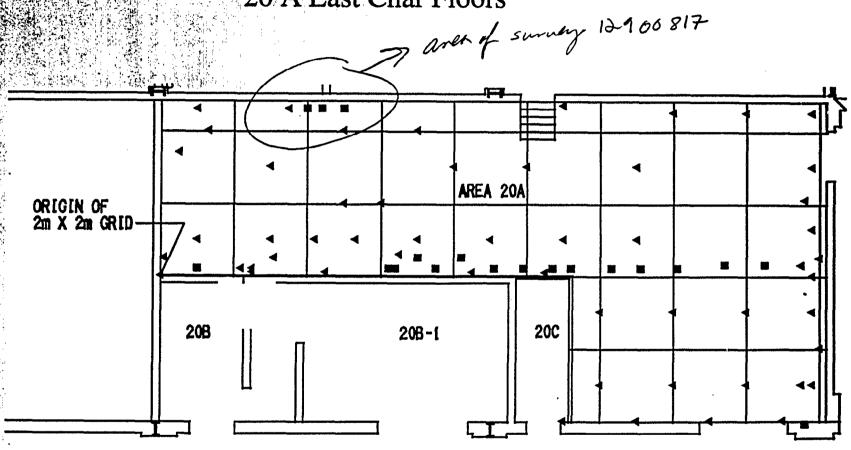
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FUSRAP PDCC:

RECEIVED FROM TMA/EBERLINE VB-LLY Mae DATE DATE

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FUSRAP-E004 (9/21/93)



Survey/file #s 12900387, 390, 457, 468, 467, 465

FUSRAP DATA TRANSMITTAL

D-26649

TO:
BECHTEL NATIONAL, INC.
FUSRAP EDM SUPERVISOR
CAO FUSRAP POCC
151 LAFAYETTE DRIVE
OAK RIDGE, TN 37830

FROM: TMA/EBERLINE 151 LAFAYETTE DRIVE P.O. BOX 350 OAK RIDGE, TN 37830

19026 SITEMBS/ 129 112 AREA .

MAIL ADDRESS P.O. BOX 350 OAK RIDGE, TN

14501-191-SC-400

DATA CODE CH'SUNU

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	PERVISOR			DATE	PROJECT 1	EAM LEADER		DATE
PROJEC	T TEAM LEAD			DATE			-	
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FUSRAP POCC

RECEIVED FROM TMA/EBERLINE _

RETURNED TO POCC

14 5/2 FUSRAP-E004 (9/21/93)

	Comments: *8												V15
Direct Surface and Transferable Contamination Survey		Surveyo	r Sign:	DIRECT S	SURFACE		A PART OF THE PART	Surveyo		ERABLE	CONTAI	VAROV.	ಪ್ರಕ್ರಾತ್ರಕ್ಕೆ
	Scaler Model:				В	eta-Gamn	na	200	Aipha		В	eta-Germin	•
	Serial No.:		ESP-2 S7210		ļ	E-600 S9169			A STATE OF				
Reference No.: 12900817.XLS	Detector:		AC-3			SHP-360		POR POST	And Translation 195	Section Carlo Branch			
Survey No.: 129DT033	Serial No.:		S7969		 	S9237						·	
Data Code: CH-SURV	Cal Due Date:		05/07/97	***		07/02/97						·	
Grid ID: AREA 20A EAST-F	Bkgd CPM:		1.0			50.0							
Area: BLDG. 14	Efficiency:		0.19			0.30							
Survey By: A. THOMPSON	Area Cor Fact:		0.590			0.155			N/A			NA	
Survey Date: 07/11/96	Bkgd CT Time:		1			1							
Smears Counted By: Smear Count Date:	Smpl CT Time:		1			1			·				
	Lc (DPM):	0	21		-	355							
No. Description (x) (y) (z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpi DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV
1 FLOOR	•	14.0	115	67	1014.0	20731	1375						
2 FLOOR	•	8.0	62	52	288.0	5118	775						
3 FLOOR	•	12.0	97	62	490.0	9462	979						
4 FLOOR	•	10.0	79	57	553.0	10817	1035						
5 FLOOR		12.0	97	62	533.0	10387	1018						
6 QC FLOOR	•	12.0	97	62	1022.0	20903	1380						

Reviewed By and Date (RSSS):

Data Entered By and Date:

- 7.25.96

6

REVIEWED BY:

FUSRAP Form X-17 (04/24/95)
*DPM units per 100 cm2
Page 1 of 1

(36) 4 (37) 5m²

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	Direct Surface						r Sign: [2.	N.			Surveyo	r Clane				
Tr	ansferable Contamin	ation	ı Sur	vey		Surveyo	Righ: C	less	B	eta-Gamn	12	Surveyo	Alpha	1	B	eta-Gamm	<u>. </u>
			W -	sain.	Scaler Model:				E 60		10	AND SPECIA		\$ 6593 min	•		
			ક્રો		Serial No.:	E 2 P			59				B. 4134				``-
	Reference No.:	120	2	2XU5	Detestor:	AC-	3			360		-					
	Survey No.:	120	Min.	<u> </u>	Seriai No.:	5 79			< 9	232							
	Survey No.: -22-96 Data Code: > H	190		1251	Cal Due Dale:	5-7	-97		2-2	-92							
/	Grid ID:	200	G7151	>=	Bkgd CPM:	1			5								
	Area:	Bids	14		Efficiency:	0.1	92		0.3	800							
	Survey By:	A.TH	enes	زي	Area Cor Fact:	0.5	9			55			N/A			N/A	
	Survey Date:	7-11	-96		Bkgd CT Time:	_lm			_100								
	Smears Counted By:				Smpl CT Time:	In	<u></u>		_ln	رس_							
	Smear Count Date:				Lc (DPM):						STD	Gross	Smpl	STD	Gross	Smol	STD
Na	Description	(x)	N M	HL. (z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	DEV	CPM	DPM*	DEV	CPM	DPM	DEV
-,	Funga	1 17	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1-7		14			1014								
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Reviewed By and Date (RSSS):	 	 	 	
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Mee 2 or 2

N1

BLDG 14 AREA 20A EAST 7-11-96 1400 A. THOMPSON

PRIOR TO CHIPPING CONCRETE

ALL READING ARE CPM

DIRECT FEADINGS ONLY

5HP 360 59237 7-2-97 E 600 59169 5-6-97 ESP-2 57210 5-6-97 Ac-3 57969 5-1-97

D-26649

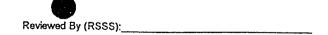
5	Thermo N L	ICCII			Comments:	,											V 1.	
~								DIRECTS	SURFACE	:			TRANSF	ERABLE	CONTAM	WATION		
νl	Direct Surface	hase				Surveyo						Surveyor Sign:						
			~			<u> </u>	Alpha			eta-Gamm			Alpha		Beta-Gamma			
- L	Transferable Contamin	natioi	ı Sur	vey	Scaler Model: Serial No.:	<u> </u>	udlum 235	50	L	udlum 222	1			Ludkum 2221				
_ r	Reference No.:	129	900457.	YI S	Detector:	<u> </u>	S7641 AC-3			S6930			***************************************			S6925		
	Survey No.:		1290045		Serial No.:	 	S7878		LC	JDLUM 44	-9		SAC-4		HP-210			
	Data Code:		CH-SUR		Cal Due Date:	 	07/17/96			S6910 3'14'97			S7923		S7753			
	Grid ID:		EA 20A		Bkgd CPM:	<u> </u>	2.0			51.0			07/03/96		08/12/96			
L	Area:		BLDG. 1	4	Efficiency/100:		0.19		0.29			0.2 0.31			41.0			
	Direct Survey By:), D. TR		Area Cor Fact:	0.590				0.155			N/A		 	0.22 N/A		
<u> </u>	Direct Survey Date:		03/26/9		Bkgd CT Time:		1			1			50		 	1		
<u> </u>	Transferable Survey By: Transferable Survey Date:	, TRO	, TROUTMAN & SLE 3/26-28/96		· · · · · · · · · · · · · · · · · · ·	1				1		1			1			
-		E	N N	96 Ht.	Lc (DPM):	<u> </u>	30			368			3			67		
	lo. Description	(x)	(1)	(z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM°	STD DEV	Gross CPM	Smpl DPM*	ST DE	
-	1 TRENCH	0.1	0.5	-0.1		9.0	63	59	151.0	2209	615	0.0	<lc -1<="" td=""><td>0</td><td>43.0</td><td><1c9</td><td></td></lc>	0	43.0	<1c9		
\vdash	2 TRENCH 3 TRENCH	1 1	0.2	-0.1		40.0	343	115	11019.0	242333	4556	4.0	12	13	45.0	<lc 18<="" td=""><td></td></lc>		
	4 TRENCH	6.2		-0.1		9.0	63	59	181.0	2872	660	0.0	<lc -1<="" td=""><td>0</td><td>30.0</td><td><1c-49</td><td></td></lc>	0	30.0	<1c-49		
	5 TRENCH	7.5	1	-0.1 -0.1		12.0 15.0	90	66 73	836.0	17344	1290	1.0	<lc 2<="" td=""><td>6</td><td>47.0</td><td>€C 27</td><td></td></lc>	6	47.0	€ C 27		
	6 TRENCH	8.2	1	-0.1		22.0	180	87	936.0 739.0	19554 15201	1361 1217	0.0	<lc 2<br=""><lc -1<="" td=""><td>- 6</td><td>31.0</td><td><1c-45</td><td></td></lc></lc>	- 6	31.0	<1c-45		
	7 TRENCH	11.2	0.2	-0.1		40.0	343	115	811.0	16792	1271	2.0	- CE-1	9	38.0 42.0	<c-13 <c-4< td=""><td></td></c-4<></c-13 		
_	8 TRENCH	12.3	0.2	-0.1		24.0	198	90	755.0	15555	1229	1.0	<lc 2<="" td=""><td>6</td><td>36.0</td><td><lc -22<="" td=""><td></td></lc></td></lc>	6	36.0	<lc -22<="" td=""><td></td></lc>		
-	9 TRENCH	13.1	0.2	-0.1	·	17.0	135	77	982.0	20570	1392	1.0	<lc 2<="" td=""><td>6</td><td>41.0</td><td>∢Lc 0</td><td></td></lc>	6	41.0	∢Lc 0		
	10 TRENCH	14.1	0.2	-0.1		12.0	90	66	503.0	9987	1019	0.0	<lc -1<="" td=""><td>0</td><td>37.0</td><td><lc -18<="" td=""><td></td></lc></td></lc>	0	37.0	<lc -18<="" td=""><td></td></lc>		
	11 TRENCH	15.4	0.3	-0.2		13.0	99	68	6659.0	146001	3547	0.0	<lc -1<="" td=""><td>0</td><td>48.0</td><td><lc 31<="" td=""><td></td></lc></td></lc>	0	48.0	<lc 31<="" td=""><td></td></lc>		
	12 TRENCH	16.5	0.3	-0.2		17.0	135	77	514.0	10230	1029	0.0	<lc -1<="" td=""><td>0</td><td>33.0</td><td><lc -36<="" td=""><td></td></lc></td></lc>	0	33.0	<lc -36<="" td=""><td></td></lc>		
	14 QC TRENCH	17.5 17.5	0.3	-0.2		6.0	36	50	86.0	773	507	0.0	<lc -1<="" td=""><td>- 0</td><td>43.0</td><td><lc 9<="" td=""><td></td></lc></td></lc>	- 0	43.0	<lc 9<="" td=""><td></td></lc>		
L	14 GO TACAGA	1 17.51	0.3	-0.2		4.0	<lc 18<="" td=""><td>43</td><td>91.0</td><td>884</td><td>516</td><td>0.0</td><td><lc -1<="" td=""><td>0</td><td>45.0</td><td><lc 18<="" td=""><td></td></lc></td></lc></td></lc>	43	91.0	884	516	0.0	<lc -1<="" td=""><td>0</td><td>45.0</td><td><lc 18<="" td=""><td></td></lc></td></lc>	0	45.0	<lc 18<="" td=""><td></td></lc>		







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4	Thermo NL	Itecl	ı		Comments:											··········			
7	Direct Greek		•			About For David Frontier Surveyor Sign:								ANSFERABLE CONTAMINATION					
4	Direct Surface				SECRETARIAN DE	Alpha			T 8	Beta-Gamr	na	Surveyo	Alpha	NON		Beta-Garnn			
TT	ransferable Contami	natio	n Su	rvev	Scaler Model:	Ludla	Ludlam 2550			un 222		কালুই কুন্তিপুত	AND	THE THEAT	Ludlum 2221				
<u> </u>					Serial No.:	5 76	41		56	930			Property of the		56925				
	Reference No.:	129	10045	7-XLS	Detector:	AC-	· 3				dlun 449	S	AC. 4			Paid			
<u> </u>	Survey No.:	1129	1004	57_	Serial No.:	57	878		5	56910			7923			753			
-	Data Code:		SUR		Cal Due Date:		17-96			-14-9	7		7.3.96			12.96			
<u> </u>	Grid ID:	Ac	c 4 2	TANE		<u> </u>	Z			5 1			0 24			41			
I	Area:	105/	ldg)	4	Efficiency/100:		188			292			313		0	733			
-	Direct Survey By: Direct Survey Date:	KITOS	1,0,7	12 Lone			59		0.	155			NA			NA			
-	Transferable Survey By:	3-2	6-96		Bkgd CT Time:		31-			Men			50m1	N		mIN			
1-	Transferable Survey te:	3-26 9	P. Trostan	<u>S S/C</u> 3 <i>X</i> 8 90		10	11-		10	nin			1m11	<u>υ </u>	IMIN				
Na.	 		Gross	Gross Smpl STD			Gross Smpl STD			l Compl	CTO	Gross Smpl STD							
110	Description	(x)	(y)	Ht. (2)	Field Notes	СРМ	DPM•	DEV	СРМ	DPM*	DEV	Gross CPM	Smpl DPM*	STD DEV	CPM	DPM*	DEA		
<u> </u>	Trench	0.1	0.5	-0.1		9			151			_0		1 1	43				
2		1.0	0.2	70.1		40			11019			4			45				
3		2.2	0,2	-0.1		9			181			0			30				
4		6.2	0,2	-0.1		12			836			- i			47				
5		7.5		10.1		15			936						31				
6		8.2		-0,1		2 2			739			<u> </u>			38				
7		11.2	0.2			40			811			a			42				
8		12.3	5.0	-0.1		24		· · · · · · · · · · · · · · · · · · ·	755			-8			36				
9		13. 1	0.2	-0.1		דו			982		<u>-</u>				41				
10		14.1	5.0	-0.1		12			503			0			37				
11		15.4	0.3	-0.2		13			659			0			48				
12		16.5	0.3	-0.Z		רו			514			0			3.3				
13	<u> </u>	17.5	0.3	-0.2		4			86			0			43	-			
14	OC 0E *13	17.5	0.3	-0.2		4			91			0			45				
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Comments:

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1				je s	· 25 · 10	DIRECTS	URFACE	er grav	14,911	1 Sec 27 2 26 .	TRANSFI	ERABLE	CONTAN	WATION				
h	Direct Surface	and	_			Surveyo				eta-Gamm	12	Surveyo				eta-Gamm		
Т¢	ransferable Contamin	ation	Sur	vev	Scaler Model:	L	udlum 235	0		udlum 222			Mit At			ud'um 222		
<u></u>					Serial No.:		S7638			S6928		5 Sec. 25.		1	S6925			
	Reference No.:		900467		Detector:		AC-3		L	udlum 44-	9		SAC-4		HP-210			
<u> </u>	Survey No.:	7	Serial No.;		S7969			S9141		1	S7923			S7753				
	Data Code:	V	Cal Due Date:		05/02/96			08/17/96			07/03/96			08/12/96				
<u> </u>	Grid ID:	ST-F	Bkgd CPM:		3.0			60.0	***************************************		0.2			45.0				
—	Area:		Efficiency:		0.19			0.23			0.31			0.22				
<u> </u>	Survey By:	·	Troutm		Area Cor Fact:		0.590			0.155			N/A		-	N/A		
┞—	Survey Date:		03/28/96		Bkgd CT Time:		1			1			50		1			
 	Smears Coun , By:		Slemo		Smpl CT Time:		1			1			1		1			
<u> </u>	Smear Count Date:		04/04/96		Lc (DPM):		36			511			2		70			
No.	Description	(x)	(y)	Ht. (z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	
1	Trench	2.5	0.2	-0.1		2.0	<lc -9<="" td=""><td>39</td><td>214.0</td><td>4358</td><td>918</td><td>0.0</td><td><lc -1<="" td=""><td>0</td><td>41.0</td><td>€c-18</td><td>82</td></lc></td></lc>	39	214.0	4358	918	0.0	<lc -1<="" td=""><td>0</td><td>41.0</td><td>€c-18</td><td>82</td></lc>	0	41.0	€c-18	82	
2	Trench	3.1	0.5	-0.1		3.0	<lc 0<="" td=""><td>43</td><td>146.0</td><td>2434</td><td>796</td><td>0.0</td><td><lc -1<="" td=""><td>0</td><td>50.0</td><td>∢c 22</td><td>86</td></lc></td></lc>	43	146.0	2434	796	0.0	<lc -1<="" td=""><td>0</td><td>50.0</td><td>∢c 22</td><td>86</td></lc>	0	50.0	∢c 22	86	
3	Trench	4.2	1	-0.3		1.0	<lc -18<="" td=""><td>35</td><td>53.0</td><td><lc -198<="" td=""><td>590</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	35	53.0	<lc -198<="" td=""><td>590</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	590							
4	Trench	5.3	1	-0.3		3.0	<lc 0<="" td=""><td>43</td><td>56.0</td><td><lc -113<="" td=""><td>597</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	43	56.0	<lc -113<="" td=""><td>597</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	597							
5	Trench	6.4	0.2	-0.2		18.0	133	80	1006.0	26769	1811	1.0	3	6	49.0	<la>18</la>	85	
6	Trench	7	0.5	-0.2		22.0	169	87	876.0	23090	1697	2.0	6	9	48.0	€ c 13	85	
7	Trench	9.1	0.2	-0.2		10.0	62	63	897.0	23684	1716	0.0	<lc -1<="" td=""><td>0</td><td>38.0</td><td>4c-31</td><td>80</td></lc>	0	38.0	4c-31	80	
8	Trench	9.9	0.2	-0.2		15.0	106	74	869.0	22892	1690	0.0	<lc -1<="" td=""><td>0</td><td>54.0</td><td>⊲∟ 40</td><td>87</td></lc>	0	54.0	⊲ ∟ 40	87	
8	Trench	10.7	0.2	-0.2		20.0	151	83	1072.0	28636	1866	0.0	<lc -1<="" td=""><td>0</td><td>43.0</td><td>46-8</td><td>82</td></lc>	0	43.0	46-8	82	
10	Trench	18	0.5	-0.2		3.0	<lc 0<="" td=""><td>43</td><td>59.0</td><td><lo -28<="" td=""><td>605</td><td></td><td></td><td></td><td></td><td></td><td></td></lo></td></lc>	43	59.0	<lo -28<="" td=""><td>605</td><td></td><td></td><td></td><td></td><td></td><td></td></lo>	6 05							
11	QC Trench	18	0.5	-0.2		3.0	<lc 0<="" td=""><td>43</td><td>65.0</td><td><lc 141<="" td=""><td>620</td><td></td><td></td><td></td><td></td><td>1</td><td>l</td></lc></td></lc>	43	65.0	<lc 141<="" td=""><td>620</td><td></td><td></td><td></td><td></td><td>1</td><td>l</td></lc>	620					1	l	

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	· [Alpha			leta-Gamn	na		Alpha	E	Bota-Game	ma				
	1:	Fransferable Co	ntamin	iatio	n Sur	vey	Scaler Model:		C- 2350		<u> </u>	-555	1		大学などは		by C	md-2321				
	<u> </u>						Serial No.:		S 7638	3		ج رودروو	3		والمالية والمالية		5	56925				
		Reference		1/25	10049	7.XS		ļ	AC - 3		11	L - 44-	<u>.</u> 9		AC- 4		-	H4 310				
	<u> </u>	Survey		1/28	0046	$7 \perp$	Serial No.:	<u> </u>	3 796	<u>}</u>	2	9141			5792			<u> 57753</u>				
	<u> </u>	Data C			-Sur		Cal Due Date:		5/2/96	·		3/17/96	<u> </u>	<u> </u>	7.3.9	6		8.12.96				
	-		id ID:	-	105	<u>4 - F</u>	Bkgd CPM;	<u> </u>	3			မဝ			0.2			45				
	-		Area:		<u>ં ખ</u>		Efficiency/100:		0.191			855.0		<u> </u>	0 30	8		<u> 323</u>				
		Direct Surve			מאוויסי	۳۲)	Area Cor Fact:		<u>098 a</u>			2.155		ļ	NA			NA				
: .			Date:		H/96		Bkgd CT Time:		1 MIN			IMIN			<u>50m</u>		}	mIN				
•	-	Transferable Surve		بے	Slem	205	Smpl CT Time:	1 Min			ļ	ININ	·	ļ	imi	N	1	mIV	····			
	<u> </u>	Transferable Survey I	Date;		· 4.9		Lc (DPM):	 						 	T	·	ļ	,				
	No			(x)	(y)	Ht. (2)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	DEV			
		TRENCH		2.5	5.0	-c.i		2	ļ		214						41					
	5			3.1	0.5	-0,1		3			146			0	l		50	!	1			
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				4,1	ح . ن	5.00		10			<i>ध</i> न्			0			38					
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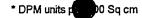
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TRANSFERABLE CONTAMINATION

¥	Dinast Courts	Y			.,	Surveyo	Sign:					Surveyo	r Slan:						
1	Direct Surface				i		Alpha		В	eta-Gamm	na		Alpha	1	В	eta-Gamm	18		
T	ransferable Contamin	ation	Surv	vev	Scaler Model:	Lu	ıdlum 235	0	Li	udlum 222	1								
				3	Serial No.:		S7638			S6928		·			36925				
<u> </u>	Reference No.:	129	00468.	XLS	Detector:		AC-3		L	udlum 44-	9		SAC-4		HP-210				
<u></u>	Survey No.:	1:	290046	88	Serial No.:		S7969			S9141			S7923		S7753				
<u> </u>	Data Code:	C	H-SUR	V	Cal Due Date:		05/02/96			08/17/96			07/03/96		08/12/96				
	Grid ID:	Area	20A EA	\ST-F	Bkgd CPM:		3.0			60.0			0.2		45.0				
L	Area:	E	Bldg. 14	1	Efficiency:		0.19			0.23			0.31			0.22			
	Survey By:	an	Area Cor Fact:		0.590			0.155			N/A			N/A					
<u></u>	Survey Date:	6	Bkgd CT Time:		1			1			50			1					
	Smears Cou J By:	ns	Smpl CT Time:		1			1			1		1						
L	Smear Count Date:		4/04/9		Lc (DPM):		36			511			2		70				
Na.	Description	E (x)	N (y)	Ht. (z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV		
	Floor	14	4.5	0		1.0	<lc -18<="" td=""><td>35</td><td>72.0</td><td><lo 340<="" td=""><td>637</td><td></td><td></td><td></td><td></td><td></td><td></td></lo></td></lc>	35	72.0	<lo 340<="" td=""><td>637</td><td></td><td></td><td></td><td></td><td></td><td></td></lo>	637								
2	Floor	16	4.5	0		1.0	<lc -18<="" td=""><td>35</td><td>67.0</td><td><lc 198<="" td=""><td>625</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	35	67.0	<lc 198<="" td=""><td>625</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	625								
3	Floor	17.8	4.5	0		5.0	<lc 18<="" td=""><td>49</td><td>72.0</td><td><lc 340<="" td=""><td>637</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	49	72.0	<lc 340<="" td=""><td>637</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	637								
	Floor	17.8	3	0		6.0	<lc 27<="" td=""><td>52</td><td>58.0</td><td><lc -57<="" td=""><td>602</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	52	58.0	<lc -57<="" td=""><td>602</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	602								
_ 5	Floor	17.6	2.1	0		3.0	<lc 0<="" td=""><td>43</td><td>192.0</td><td>3735</td><td>880</td><td>0.0</td><td><lc -1<="" td=""><td>0</td><td>47.0</td><td>≪Lc 9</td><td>84</td></lc></td></lc>	43	192.0	3735	880	0.0	<lc -1<="" td=""><td>0</td><td>47.0</td><td>≪Lc 9</td><td>84</td></lc>	0	47.0	≪ Lc 9	84		
6	Floor	17.8	1.3	0		1.0	<lc -18<="" td=""><td>35</td><td>171.0</td><td>3141</td><td>843</td><td>1.0</td><td>3</td><td>6</td><td>48.0</td><td><Lc 13</td><td>85</td></lc>	35	171.0	3141	843	1.0	3	6	48.0	< Lc 13	85		
7	Floor	17.8	0	0		1.0	<lc -18<="" td=""><td>35</td><td>91.0</td><td>877</td><td>682</td><td>0.0</td><td><lc -1<="" td=""><td>0</td><td>40.0</td><td><lc -22<="" td=""><td>81</td></lc></td></lc></td></lc>	35	91.0	877	682	0.0	<lc -1<="" td=""><td>0</td><td>40.0</td><td><lc -22<="" td=""><td>81</td></lc></td></lc>	0	40.0	<lc -22<="" td=""><td>81</td></lc>	81		
8	Floor	17.8	-1	0		2.0	<lc -9<="" td=""><td>39</td><td>75.0</td><td><lc 424<="" td=""><td>644</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	39	75.0	<lc 424<="" td=""><td>644</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	644								
9	Floor	17.8	-3	0		4.0	<lc 9<="" td=""><td>46</td><td>80.0</td><td>566</td><td>656</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	46	80.0	566	656								
10	Floor	17.6	-4.1	0		53.0	444	130	811.0	21251	1637	1.0	3	6	31.0	<lc-63< td=""><td>77</td></lc-63<>	77		
11	Floor	1.3	- 4	0		1,0	<lc -18<="" td=""><td>35</td><td>70.0</td><td><lc 283<="" td=""><td>632</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	35	70.0	<lc 283<="" td=""><td>632</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	632								
12	Floor	1	4.6	0		2.0	<lc -9<="" td=""><td>39</td><td>67.0</td><td><lc 198<="" td=""><td>625</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	39	67.0	<lc 198<="" td=""><td>625</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	625								
13	Floor	0.5	3.4	0		1.0	<lc -18<="" td=""><td>35</td><td>43.0</td><td><lc -481<="" td=""><td>563</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	35	43.0	<lc -481<="" td=""><td>563</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	563								
14	Floor	4	4.6	0		5.0	<lc 18<="" td=""><td>49</td><td>1150.0</td><td>30843</td><td>1929</td><td>0.0</td><td><lc -1<="" td=""><td>0</td><td>50.0</td><td>≪Lc 22</td><td>86</td></lc></td></lc>	49	1150.0	30843	1929	0.0	<lc -1<="" td=""><td>0</td><td>50.0</td><td>≪Lc 22</td><td>86</td></lc>	0	50.0	≪ Lc 22	86		
15	QC Floor	4	4.6	0		4.0	<lc 9<="" td=""><td>46</td><td>1046.0</td><td>27900</td><td>1844</td><td>1.0</td><td>3</td><td>6</td><td>41.0</td><td><<u>₹.c-1</u>*</td><td>82</td></lc>	46	1046.0	27900	1844	1.0	3	6	41.0	< <u>₹.c-1</u> *	82		

DIRECT SURFACE

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-						-		FE SECTION IN	\$ 45 CASE \$	Sert 人名西姆斯	DIRECT	SURFACE	N 17 (17 (18)	क ोजन हो।	354 Table 8	TRANSF	ERABLE	CONTAN	UNATION	ميازن عراجيءا
								1.00	ł .			/								
'		r	Direct S	Surface	and			公司等 被	Surveyo	r Sign: -	Soviet,	jouhna	<u> </u>		Surveyo	r Sign:	<u> </u>			
Т	'rane	fern	ble Co	ntamir	natio	n S	******	Scaler Model:	 	Alpha			Beta-Gamr		ļ	Alpha			Beta-Gamn	
' ^	1 ((11)	iter a	DIC CU	1114111111	uatio.	ıı Suı	vey	Sorial No.:	·	<u>L. 235</u> S 7631			-555			-tablesia			9- 292	·}
			Reference	No.:	1729	70046	8.XL3			AC · 3	<u> </u>		5 - 6928 L - 44 -6			AC. 4			,925	
			Survey	y No.:	1/2	90040	58	Serial No.:		5 796°	<u> </u>	_	S 9141			7923			7753	
			Data (CH-	SUR	V	Cal Duo Date:		5/5/9			8/17/9			0-3 7			113.96	
				id ID:	F.12	<u> </u>	PATE			3			60	<u> </u>		308			45	
-				Area:		DC 1		Efficiency/100:		0.191			o. टर्स			AVA O		2	393	
			irect Surve			TROUT		Area Cor Fact:		0.590			0-155		62	NA			NA	
-	Ψ.		ect Survey			इह्य/१८		Bkgd CT Time:		1 MIN		 	1 MINI			50m			mIN	
			able Surve			Sle n		Smpl CT Time: Lc (DPM):	<u> </u>	1 MIN	 -	.]	IMIN		<u> </u>	1111	N		mlN	
<u> </u>	T			Date.	E	N N	G HI.		Gross	Smpl	C70	-							,	
No.	<u> </u>	-LOCR 14 4.5						Field Notes	CPM	OPM*	DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV
-	<u> </u>								<u>i</u>			רב								
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3					17.8	4.5	0		5			בר								
ч					ורו.8	.ن <u>3</u>	O					5 8	-							
5					17.6 +1 8	1001 KWR.	0		3			192			0			47		
<u>U</u>					17.8	1.3	67		1			171			1			48		
7	<u> </u>				17.8	0	0		1			41			0			40		
8					17.E	- ,	0		z			75								
c)					17.8	-3	O		.4			80								
10	<u> </u>				17.0	-4.1	0		53			811			1			31		
111					1.3	4	0		ı			70								
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13					0.5	3,4	0					43							•	
14					4	4.6	0		5			1150			C			50		
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F	Thermo NU	tech			Comments:												V1.4
士					१८० क्याहर	1, 5	,	DIRECT	SURFAC	E ·	52)	zja -	TRANSF	ERABLE	CONTAL	UNATION	į
1	Direct Surface	and	_		1:	Surveyo						Surveyo	or Sign:				
ሢ						ļ	Alpha			eta-Gamn			Alpha			eta-Gamn	
	ransferable Contamin	atior	ı Sur	vey	Scaler Model: Serial No.:	 			<u> </u>	udlum 222 S6928	21	ļ			<u> </u>	udium 222	21
┯-	Reference No.:	120	900479.	YIS	Detector:				 	UDLUM 44		ļ	010.1		ļ	\$6925	
	Survey No.:		1290047		Serial No.:			***************************************		S6910	1-9		SAC-4 S7923			HP-210 \$7753	
	Data Code:		CH-SUR		Cal Due Date:	1				03/14/97		ļ	07/03/96			08/12/96	
-	Grid ID:		A 20 B		Bkgd CPM:				 	49.0	——————————————————————————————————————	!	0.2			37.0	
	Area:		BLDG. 1		Efficiency:	1			·	0.29			0.31			0.22	
	Survey By:		R. FOR		Area Cor Fact:					0.155			N/A			NA	
	Survey Date:		04/10/9		Bkgd CT Time:					1			50		· · · · · · · · · · · · · · · · · · ·	1	
	Smears Counted By:		& SLE							1			1			1	·····
<u> </u>	Smear Count Date:		/10-11/9		Lc (DPM):			,		361			2			64	
No	Description	(x)	(y)	Ht. (z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV
<u> </u>	1 PIPES	8.4	0.3						35.0	<lc -309<="" td=""><td>397</td><td></td><td></td><td></td><td>]</td><td></td><td></td></lc>	397]		
	2 PIPES	R.3	1.2						66.0	376	464						
	3 PIPES								79.0	663	490			·			
	4 PIPES	6.9	2.8						70.0	464	472						
	5 PIPES	6	2.1						71.0	486	474						
	6 PIPES	7.1	1.2						56.0	<lc 155<="" td=""><td>444</td><td></td><td></td><td></td><td></td><td></td><td><u> </u></td></lc>	444						<u> </u>
	7 PIPES	5.1	1						50.0	<lc 22<="" td=""><td>431</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	431						
	8 PIPES	5	2.2						63.0	<lc 309<="" td=""><td>458</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	458						
	9 PIPES	4.7	3.1						58.0	<lc 199<="" td=""><td>448</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	448						
1	0 PIPES	3.4	3					İ	61.0	<lc 265<="" td=""><td>454</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	454						
1	1 PIPES	2.9	2						72.0	508	476						
1	2 PIPES	2.8	0.2				! 		52.0	<lc 66<="" td=""><td>435</td><td></td><td></td><td></td><td></td><td></td><td> </td></lc>	435						
1	PIPES	1.5	1						47.0	<lc-44< td=""><td>424</td><td></td><td> </td><td></td><td></td><td></td><td></td></lc-44<>	424						
1	4 PIPES	1.7	3						51.0	<lc 44<="" td=""><td>433</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	433						
1:	HEATER-VENT	2.6	2.5						59.0	<lc 221<="" td=""><td>450</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	450						
1	HEATER-VENT	2.8	3						63.0	<lc 309<="" td=""><td>458</td><td></td><td></td><td></td><td></td><td></td><td>J</td></lc>	458						J
1	HEATER-VENT	2.5	3.5						36.0	<lc -287<="" td=""><td>399</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	399						
11	VS VENT	6.9	0.8						47.0	<lc -44<="" td=""><td>424</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	424						
15	ROUND ELECTRICAL UNIT	6.1	3						2053.0	44278	1985						
_20	LIGHT FIXTURE	6.9	1.5						60.0	<lc 243<="" td=""><td>452</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	452						
21	QC LIGHT FIXTURE	6.9	1.5						67.0	398	466						

Reviewed (RSSS): Tay MD

* DPM units p D0 Sq cm

Thermo NUted	ch	Commonts:	- Over	heads										
			医眼镜学系数	er Granding	DIRECT S	URFACE	5, 5, - ,	12.00	61	TRANSFI	ERABLE	CONTAM	NATION .	A 34 * 4 2
Direct Surface an	ıd		Surveyo	r Sign: 7/2	1/2 m	<i>A</i>	eta-Gamma		Surveyor	Sign: Z/A	1771	/ Q	Lecone eta-Gamm	<u>~</u>
Tuanafamable Contamination	ian Cumian	Scaler Model:		White					1 - A 10 -	Copina Copina	2000			
Transferable Contaminati	ion Survey	Sorial No.:			/		um 222	· I				- 6-011 S/	925 925	* /
Reference No.: 10	2900 479.XIS	Detector:			/		um 44-9	7		AC- 4			7.210	
	2900479	Serial No.:		N		5	6410			1923			7753	
		Cal Duo Date:				3-1	4-97		7	.3.96			12-96	
Grid ID: Ara	cn 20-0.C - 04-0	Bkgd CPM:		/ A			9			0.2			. 7	
Area: /S	129 14	Efficiency/100:					292			1.308	-	0.	773	
	Find	Area Cor Fact:					155			NA			UA_	
	10-96	Bkgd CT Time:					<u> </u>			TO MI			niv_	
Transferable Survey By:		Smpl CT Time: Lc (DPM):								1 711		1.0	niv	
	-14 4.11.56 N HI.		Gross	Smpl	STD	Gross	Smpl	SID	Gross	Smpi	SID	Gross	Smpi	SID
	x) ·(y) (2)	Field Notes	CPM	DPM*	DEV	CPM	DPM*	DEV	СРМ	DPM*	DEV	CPM	DPM*	DEV
1 Pipes 8.	4 0.3	*			/	35								
2 8.						66								
									· · · · · · · · · · · · · · · · · · ·		 			
			ļ			79			·					
4 6.					/	70					ļ			<u> </u>
	.0 2.1					71			ļ <u></u>					
6 7.	.1 1.2					56					<u>. </u>			
7 5.	1 1.0				/	50					 			
	70 22					63.								
	7.7 3.1			N		58								
	.4 3.0			/-/-		61								
				1					·					
	,9 2.0			14		72			·[l		
	8 0.z			/		52			.	 				
13 /.	.5 1.0			/		47							•	
14 1.	7 3.0			/		51								
	.6 2.5		/			59								
	8 3.0					63								
17 2.						36								
	9 0.8		-/-			47								
			/ -			2053			0			42		
19 Round Electrical Unit 6.	.1 3.0		/						-	 				
20 Light Fixture 6.			/ -			60			·					
21 QC#20 6.	.9 1.5	<u> </u>	<u> </u>			67			<u> </u>	<u> </u>	L	1	l	L



	Thermo NU	ltech			Comments:								···		 		V14
T					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 •		DIRECTS	SURFAC	E -		r :	TRANSF	ERABLE	CONTAK	INATION	
9	Direct Surface	and	_		١.	Surveyo						Surveyo					
7			~				Alpha		В	eta-Gamr	na		Alpha		В	eta-Gamm	12
, h I	Transferable Contamii	natior	a Sur	vey	Scaler Model:	. L	udlum 23	50	L	udlum 22:	21					dum 222	
	Reference No.:	1 400	200400	VI 0	Serial No.:		S7640			S6930						S6925	
7	Survey No.:		900480 129004		Detector:		AC-3		LU	JDLUM 44	4-9		SAC-4			HP-210	And the Control of th
-	Data Code:		CH-SUP		Serial No.: Cal Due Date:		S9012			S6914			S7923			S7753	
	Grid ID:		A 20 B		Bkgd CPM:		07/04/96 4.0			03/14/97			07/03/96			08/12/96	
	Area:		BLDG.		Efficiency:	<u> </u>	0.20			52.0 0.22			0.2			37.0	
	Survey By:		FORD		Area Cor Fact:	 	0.590			0.22			0.31 N/A			0.22	
	Survey Date:	- 	04/10/9		Bkgd CT Time:		1			0.100			50			N/A 1	
	Smears Counted By:	FORD	& SLE	MONS	Smpl CT Time:		1			<u>:</u>			1			<u>'</u>	
<u> </u>	Smear Count Date:	Description					40			498		l	2			64	
No.	Description	(x)	(y)	Ht. (z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV
	1 WALL	9.5	0.1	1.3		7.0	<lc 26<="" td=""><td>56</td><td>89.0</td><td>1095</td><td>689</td><td>0.0</td><td><lc -1<="" td=""><td>0</td><td>42.0</td><td>∢c22</td><td>79</td></lc></td></lc>	56	89.0	1095	689	0.0	<lc -1<="" td=""><td>0</td><td>42.0</td><td>∢c22</td><td>79</td></lc>	0	42.0	∢c22	79
	2 WALL	9.5	2	0.5		4.0	<lc 0<="" td=""><td>47</td><td>43.0</td><td><lc -266<="" td=""><td>565</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	47	43.0	<lc -266<="" td=""><td>565</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	565						
	3 WALL	9.5	3.8	0.6		5.0	<lc 9<="" td=""><td>50</td><td>43.0</td><td><lc -266<="" td=""><td>565</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	50	43.0	<lc -266<="" td=""><td>565</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	565						
	4 WALL	10.2	4.3	1.7		5.0	<lc 9<="" td=""><td>50</td><td>38.0</td><td></td><td>550</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	50	38.0		550						
	5 WALL	10.85	4	0.7		12.0	68	67	24.0		506						
	B WALL	10.85	2	1.5		18.0	120	79	35.0	<lc -503<="" td=""><td>541</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	541						
	7 WALL	10.85	0.4	0.8		10.0	51	63	40.0		556						
	B WALL	9.7	0	1.6		5.0	<lc 9<="" td=""><td>50</td><td>34.0</td><td><lc -533<="" td=""><td>538</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	50	34.0	<lc -533<="" td=""><td>538</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	538						
	ELECTRICAL BOX	9.6	0.3	0.8		2.0	<lc -17<="" td=""><td>41</td><td>47.0</td><td><lc -148<="" td=""><td>577</td><td></td><td>*</td><td></td><td></td><td></td><td></td></lc></td></lc>	41	47.0	<lc -148<="" td=""><td>577</td><td></td><td>*</td><td></td><td></td><td></td><td></td></lc>	577		*				
10	ELECTRICAL BOX	9.6	1.8	1.39		7.0	<lc 26<="" td=""><td>56</td><td>1748.0</td><td>50192</td><td>2461</td><td>0.0</td><td><lc-1< td=""><td>0</td><td>46.0</td><td>₹£40</td><td>80</td></lc-1<></td></lc>	56	1748.0	50192	2461	0.0	<lc-1< td=""><td>0</td><td>46.0</td><td>₹£40</td><td>80</td></lc-1<>	0	46.0	₹£40	80
	ELECTRICAL BOX	9.6	1.75	1.76		5.0	<lc 9<="" td=""><td>50</td><td>571.0</td><td>15360</td><td>1448</td><td>0.0</td><td><lc -1<="" td=""><td>0</td><td>37.0</td><td>4€0</td><td>76</td></lc></td></lc>	50	571.0	15360	1448	0.0	<lc -1<="" td=""><td>0</td><td>37.0</td><td>4€0</td><td>76</td></lc>	0	37.0	4€0	76
12	ELECTRICAL BOX	9.65	1.9	2.12		3.0	<lc-9< td=""><td>44</td><td>1366.0</td><td>38887</td><td>2184</td><td>0.0</td><td><lc -1<="" td=""><td>0</td><td>52.0</td><td>67</td><td>83</td></lc></td></lc-9<>	44	1366.0	38887	2184	0.0	<lc -1<="" td=""><td>0</td><td>52.0</td><td>67</td><td>83</td></lc>	0	52.0	67	83
13	ELECTRICAL BOX	9.75	3.7	1.4		7.0	<lc 26<="" td=""><td>56</td><td>25.0</td><td><lc -799<="" td=""><td>509</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	56	25.0	<lc -799<="" td=""><td>509</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	509						
14	CEILING	9.7	0.5]		4.0	<lc 0<="" td=""><td>47</td><td>38.0</td><td><lc -414<="" td=""><td>550</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	47	38.0	<lc -414<="" td=""><td>550</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	550						
15	CEILING	9.7	2.5			6.0	<lc 17<="" td=""><td>53</td><td>41.0</td><td><lc -326<="" td=""><td>559</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	53	41.0	<lc -326<="" td=""><td>559</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	559						
16	CEILING	9.7	4.1			5.0	<lc 9<="" td=""><td>50</td><td>48.0</td><td><lc -118<="" td=""><td>580</td><td></td><td></td><td></td><td></td><td></td><td></td></lc></td></lc>	50	48.0	<lc -118<="" td=""><td>580</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	580						
17	QC CEILING	9.7	4.1			7.0	<lc 26<="" td=""><td>56</td><td>37.0</td><td><lc -444<="" td=""><td>547</td><td></td><td></td><td></td><td>İ</td><td></td><td></td></lc></td></lc>	56	37.0	<lc -444<="" td=""><td>547</td><td></td><td></td><td></td><td>İ</td><td></td><td></td></lc>	547				İ		

Reviewe (RSSS): Fage MD



	Thermo NU	Jtech:	1		Commonts:		······································			<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>							
						Section 1	art Walant	DIRECT	URFACE	a arija	त किल्केश्रीक	e e e	TRANSF	ERABLE	CONTAN	INATION-	
	Direct Surfac	e and				Surveyo	r Sign: >	phit 7		leta-Gamn		Surveyo	r Sign: 🏸		/ca	lemo	~~Q
Tı	ransferable Contami	natio	n.Su	rvev	Scaler Model;	Lud				222/	[]e]	1 to 54 to 12	Alpha	2.7.7 m m		lota-Gamn	
				_	Serial No.:			U XFYWE			25410 X					3692	
	Reference No.:			1XL5	Dotector:	AL-	3			44-9	7.7		c-4			Ht 910	<u>'</u>
	4-12-96 cm Survey No .:	129	DD 0	2480	Serial No.:	5901	2		569	174			923		-	>775	3
	Data Code: Grid ID:	-			Cal Duo Date:	3-14	47	7-4-96	3-	-14-9	7		3 96			8.19.90	
	Area:	Bldg	20-66	- W	Bkgd CPM:	·		11-46	حد				٠. کــــــــــــــــــــــــــــــــــــ			37	
-	Direct Survey By:	L.Fort	14		Efficiency/100: Area Cor Fact:	0.1				218			308		<u> </u>	5.223	<u> </u>
	Direct Survey Date:	445.16			Bkgd CT Time:	<u>0.5</u>				155			NA		 	NA	
	Transferable Survey By:	C.F.		Emou		10				<u>rii.</u>			70 m		<u> </u>	imiz	<u>'</u>
	Transferable Survey Date:	4496		1.96	Lc (DPM):								1 m1/	<u> </u>		Imin	
No.	Doscription	(x)	(y)	111.	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Sinpl DPM*	STD DEV	Gross CPM	Smpl DPM*	DCV SID	Gross CPM	Smpl DPM*	DEA
14	Wa//	9.5	0.1	1,3		_7_			89			0			40		
2		9.5	2.0	0.5		4			43								
3		9.5	3.8	0.6		5-			43								
4		10.2		1.7		5	5		38								
5		10.85	4.0	0.7		12			24								
6		10.85	2.0	1.5		18			35								
7		10.85	0.4	0.8		10			40			~					<u> </u>
8	V	9.7	0.0	1.6		5			34.								
9	Electrical Box	9.6	0.3	0.8		Z			47								l
10		9.6	1,8	1.39		7			1748			0			460		
$ \mu $		9.6	1.75	1.76		5			571			0	·		37		
12		9.65	1.9	2./2		3			1366			2			5h		
13	Electrical Bux	9,15	3,7	1,4		7			25							i	
14	Ceiling	9.7	0.5			4			38				-				
15		9.7	2,5			6			4/								
16		9,7	4.1			5			48								
17	Qc #16	9.7	4,1			7			37								
			The	F	toci							£ 5					
	N.		114					-					11-26				
								 -	-								
<u></u>		<u> </u>	<u> </u>	LI													_

Designat D. (Pere).

TO:
BECHTEL NATIONAL, INC.
FUSRAP EDM SUPERVISOR
C/O FUSRAP PDCC
151 LAFAYETTE DRIVE
OAK RIDGE, TN 37830

FROM: TMA/EBERLINE 151 LAFAYETTE DRIVE P.O. BOX 350 OAK RIDGE, TN 37830 NO 2 596 - 039

DATE 11 17/96

SITEMBS 129

AREA Prax Air

MAIL ADDRESS P.O. BOX 350 OAK RIDGE, TN

14501-191-SC-400

DATA CODE LH - SURY

	ITEM NO.	DATE	PAGES		DESCRIPTION	
:	1	10/17/96	4	Area 20A, East OC#20 PIPE,	FF 129 DT032 -C PIPE SURVEY.	H-SURY
	121	10/17/96	41	An as ita	s/11/18/96	
•	2:	0/17/91	4	Same as # 1	124 DT 032-0	H-BURY
/ yet (.43~	16/14/96	~3~	OC#3, I-Be	CH-SURY WILL	
n /	4	10/10/96	3	OC#GELB	2m 102 F CH-SURV	NA
	ÆV	10/08/96	~3~	ACH2, I-Bran	H-SURV BY 401	H-SURY
0100	6	10/09/96	3	OC# 4 Top & B		CH swell
0,1	7/	10/10/96	3	ACHY 158 Proof PM		Λ,
10 to 15 to	$\overline{}$			130 PICOL EM	115 1518 101	the state of the s
king.						•
		COMPLIANCE S	CREENING CI	IECKLIST ATTACHED?		
	//\			KLIST ATTACHED?	ldg 14, aren 20 A	East
		SAMPLE RESUI R REVIEW CON		EPORT ATTACHED?	liky 14, area 20 A bslab pipe survey (n pipe leading to s ed a backfilled afters	interior)
				54	bstate pipe	ener (
				-drain	n pipe leading to	
				(plngge	ed abackfilled afters	urneys (
				Ç 00		
			TCAL LABORA NIC DATA, E.G		OTHER RADIOLOGICAL DATA (NON-ELECTRONIC DATA, E.G., CH -	· · · · · · · · · · · · · · · · · · ·
į	EDM RE	VIEW BY		DATE	PROJECT TEAM REVIEW BY	DATE
	EDM SU	PERVISOR	$\rightarrow \!$	DATE	PROJECT TEAM LEADER	DATE 6
ł	//	_/			Vaurence acon Bach	
7.	// PROJEC	HEAM LEADE	R	DATE	The state of the s	12/19/18/

27452

RECEIVED FROM TMA/EBERLINE ______ DATE ______

RETURNED TO POCC ______ DATE _____

FUSRAP-E004 (9/21/93)

FUSRAP DATA TRANSMITTAL D-27452

TO: BECHTEL NATIONAL, INC. FUSPAP EDM SUPERVISOR C/O FUSRAP PDCC Y31 LAFAYETTE DRIVE OAK RIDGE, TN 37830 FROM: TMAEBERLINE 151 LAFAYETTE DRIVE P.O. BOX 350 OAK RIDGE, TN 37830 Ng. 576-039

DATE 11 17/76

SITEMBS 129

AREA PLAX Air

MAIL ADDRESS P.O. BOX 350 OAK RIDGE, TN

14501-191-SC-400

DATA CODE LH- SURV

ITEM NO.	DATE	PAGES	DESCRIPTION
1	10/17/16	4	Area 20A, East F 129 DT032 -CH-SURY OC#20 PIPE, PIPE SURVEY.
K 1	10/1/196	4	Danitos 1N 11/18/96
2:	0/17/91	4	Same as #1. 129 DT 032-CH-SURV
3	114/96	3	OC#3, I-Beam 1580 TOOL CH-SURY
4	10/10/16	3	SC#GFLR 158 DT 001 RM 102 F CH-SURV
.5	10/08/16	3.	157 DF 001 CH-BURY BLD 401 CH-SURY
6	10/09/96	3	OC#4, For 6 Blacer RM 203-F 15805002 RM 203-F CH-SURV
7	10/10/96	. 3	QC#4 158 PTOOL EM 115 BID 401 CH-SURY
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MAJOR REVIE	W COMMENTS:					
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	NALYTICAL LAB ECTRONIC DATA,			(NON-ELECTRONIC DAT		UIP)
	ECTRONIC DATA,	ORATORY DATA ,E.Q. , CH - WATR)	DATE			UIP) DATE

27452

FUSRAP PDCC: 35 UST SULTING N-18-9(a RECEIVED FROM TMA/EBERLINE DATE DATE

FUSRAP-E004 (9/21/93)

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	READING			Beta-Gamma	Ludlum 2221	S9970	I I IDI I IM AA o	S9141	03/14/07	53.0	0.23	0.155	-	-	477	subj DPM*	7965	7862	5330	6592	7546	7630	10884	16858	21206	9257	36494	23675	41094	22581	36522	28527	19579	1768	26788
	RIZONTA	SURFAC						•								Gross	337.0	334.0	243.0	288.0	322.0	325.0	41.0	0.75	\$09.0	383.0	1354.0	897.0	1518.0	858.0	1355.0	1070.0	751.0	386.0	1008.0
	MS DN. H	AND DIE SURFACEURING OF THE SURFACEUR														STD DEV										1			1	1	1	1		-	1
	ROBE FACI		r Sign:	Alpha												Smp.										+	1	1	+		+		1	+	+
	20 PIPE, PI	A SUPPLIES	Surveyor Sign:													¥65			+	1	+			\dagger	\uparrow	1		-	-	+	+	1	-	+	+
	Comments: "OC #20 PIPE, PROBE FACING DN., HORIZONTAL READINGS AT 1 FT. INCREMTS, LIMABLE TO TAKE ALPHA NOR BACARE AND			医高速度受益率	Scalor Model:	Sariel No.:	Detector:	Seriel No.:	Cal Due Dete:	Bkgd CPM:	Efficiency:	Area Cor Fact	BKod CT Time:	Smol CT Time:	LC (LATM):	Field Notes																		-	
I						0,5	XLS	32	ا≍ ا	AST-F	4 3	+	+		1	B	0		, , , , , , , , , , , , , , , , , , ,				767					2 2 2		13 FT		15 FT.			. 1
		-	n Sur			42000075	CARONA	129DT032	CH-SURV	AREA 20A EAST-F	K TESCU	10/17/06	3		2	8							B F	•	0			-		213		\$.	= ;		9 5
		ce and	inatic			-	7	+	- -	₹	+	+	\downarrow	-	3	8	+	-	_	-			-		-	_	-	-							
		Direct Surface and	Transferable Contamination Survey			Reference No .	Chiesipolica (10).	Octo Code:	Data Code:	- Gialo:	Survey By	Survey Date:	Smears Counted By	Smear Count Date:	Description																				
	<u>.</u>	٠.	Tra												- g	4	2 PPE	3446	4 A	SPPE	306	7 Ppc	8 Pipe	9 PIPE	10 PIPE	1 Pipe	12 Pape	13 Pipe	Pipe	15 Pape	16 Pipe	17 PIPE	18 Pepe	to Pape	20 Pipe

FUSRAP Form X-17 (06/19/96)
*DPM units per 100 cm2
Page 1 of 2

Reviewed By and Date (RSSS):

Data Entered By and Date

73) 300)		- 12	Comments:	20 PIPE, PF	ROBE FACIN	IG DN., HO	RIZONTAL I	READINGS	AT 1 FT. IN	CREMIS, U	NABLE TO	TAKE ALP	A NOR SME	ARE IN PE	- V10
	Direct Surface ransferable Contamin	and ation	Sur	'VeV		Surveyo	r Sign:	DIRECTA	BURFACE			Surveyo	•	E.V.Y.	ener.	e war a said	
	andetinaming to the training		·				Alpha		В	eta-Gamm	a		Alpha			eta-Gerne	·
1.			£.,		Scaler Model:				L	udlum 222	1	Papels Walls					
	· 1 1 2 44,				Serial No.:					S9970		HAME					
	Reference No.:	129	00975	XLS	Detector:				LU	JDLUM 44							
Ŀ	Survey No.:	1	29DT0	32	Seriel No.:					S9141							
:	Data Code:		H-SUI	RV	Cal Due Date;					03/14/97							
<u>'L</u>	Grid ID:	AREA	1 20A E	AST-F	Bkgd CPM:					53.0							
	Area:		BLDG.	14	Efficiency:					0.23				····			
	Survey By:	H	C TESO	CH	Area Cor Fact:					0.155			NA			NA	
	Survey Date:		10/17/9	96	Bkgd CT Time:					1							
	Smears Counted By:				Smpl CT Time:					1							
L	Smear Count Date:				Lc (DPM):					477							
No	Description	(X)	(y)	HK. (z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD
2	2 PIPE			20 FT.	•				91.0	1066	660						
_2	3 PIPE			21 FT.	•				60.0	<lo 196<="" td=""><td>584</td><td></td><td></td><td></td><td></td><td></td><td></td></lo>	584						
2	4 PIPE			22 FT.	•				57. 0	<lc 393<="" td=""><td>602</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	602						

Data Entered By and Date: June Male 6,796

Reviewed By and Date(RSSS):

Reviewed By and Date (ORPO):_

FUSRAP Form X-17 (08/19/96)
*DPM units per 100 cm2
Page 2 of 2

		;				Comments: 11	ROBE =	ACTIONS	KT 10/	7/96 F	ACE'NS	down.						
i.		.				HOC HOCK	LIZON FI	IL READ:	NOS AT	IAOOt	INCREM	euts-	MAPLE.	to take	ALPHA M	UOR SM	ears in	7 NE.
4 1		Direct Surface							NUIRECT	SURFAC	LIVERAGE	BEARING THE	F Holstacone	MTRANSE	ERABLE	CONTAI	MATION	
	Tra	insferable Contami	natio	n Su	rvey		Survey	or Sign:	<u> X or</u>	<u>LD. (</u>	2 escr	\$	Surveyo	or Sign:				
					•	Scaler Model:	' 	Alpha			Beta-Gam	ma		Alpha		Ε	leta-Gern	The
h						Serial No.:	 	<u></u>			lon -2.	221					11	
тŪ		Reference No.:	129	1009	15.XL		1				59970 wm 44		A PARTY OF	22 / Cale	NAME OF STREET	ļ	1/1	
7	<u> </u>	Survey No.: Data Code:	1/33	DIC	232	Serial No.:				LVO	59141	- 1	 	-			<i>─</i>	
j,		Grid ID:		-SU 6 14		Cal Due Date;	 				3/14/9	7						
1	10	17 96 Lm Area:				Bkgd CPM: Efficiency:					53				$\overline{\mathcal{I}}$			/
4		Survey By:	P	S. TES	<u>小</u> 少	Area Cor Fact		_	_	 	0.23		Į		\rightarrow			
干		Survey Date:	1	117/9	76	Bkgd CT Time:			/	·	0.155		 	N/A			NA	_/_
-		Smears Counted By: Smear Count Date:				Smpl CT Time:				1			 		-/			
-	7		E	l N	dath	Lc (DPM):	0	<i>V</i>							/		_/_	
100		Description	(x)	0)	H2 (2)	1917 Field Notes	Gross CPM	Smpl DPM*	STD	Gross CPM	Smpl · DPM*	STD	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD
1	4-4	Pipe			0	*	NA			337				7	DEV	- C-741	UPAF	OEV
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10	<u> </u>				994					383				- }				
16		·			10 F4				7	1354								
12	 				11.54					897						-/		
13					12FE					1518			_/			$ \Theta$		
14	<u> </u>				13 PE					858			-(-			 F		
12		:			1446					1355	· -		$-\sqrt{4}$					
16		•			ISH					1010							- 	
17	<u> </u>				16 Ft		7			751				}			-/- 	
13					1761		()			386		-		y		 -	/	
19					18FC					1008				/			'	
20		<u> </u>			19F4					103				1/1		₩.	/ -+	
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1	•				Comments:	PROLE	gomy	- 4								·		
1	•				HOR	1 = ~ (4)	READIN	ss At s	LFE INC	READL	- UNAL	16-10 1	AKE K	pha war	SMELL	S IN 7:	16 V L	
团	Direct Surface	and				And the oracle This bear of	elineatical from anticov					新的拉拉斯	MTRANSF	ERABLE	CONTAI	MATION		
	ransferable Contamii	natio	n Sm	rvev		Survey	or Sign:	\mathcal{H}_{α}	20.0	Beta-Gami	0.	Surveyo	or Sian:					
-			M Du	lvcy	The state of the s		Alpha			Beta-Gam	ma	100,000	Alpha		A	Seta-Geme		
h					Scaler Model:		NA		I.	odlum -	122/	LYCENT		TA STATE	 	7;		
		7. 6. 8			Serial No.:					9970		LETTER	* 7 11	W. 165		- 		
1	Reference No.:	11239	009	75.XU 32	Detector:			7		Lodium	14-9							
1	Survey No.:	129	DIO	32.	Serial No.;					59141			/					
\succeq	Data Code: CH-SURV'			RV	Cal Due Date:					3/14/97				$\overline{}$				
ЪТ				Bkgd CPM:					53			···········	_			/		
μ_								7		0.23							1	
	Survey By: Mithy K Test Middle				Area Cor Fact:					0.155			N/A			N/A	1	
	Survey Date: K.Tesch.				Bkgd CT Time:					- 1						1		
					Smpl CT Time:								——————————————————————————————————————					
	COOT				Lc (DPM):		<u> </u>											
Na.	Description	(x)	(y)	H2 (2)	마이 56 Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl · DPM*	STD DEV	Gross CPM/	Smpl DPM*	STD DEV	Gross CPM	Smort	STD DEV	
22	7:7E	1	1	20 4	*	NA			91									
23	14			21 84					60	 		-		 				
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Data	Entered	By and	Date:
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7	Direct Surface ransferable Contamin	vey	Scalor Model: Serial No.: Detector: Serial No.:	l	Surveyor Sign: Alpha Beta-Gamma Ludlum 2221 \$9970 LUDLUM 44-9 \$9141								eenn.	ota-Garne	NE FRENCH		
-	Data Code:		CH-SUF		Cal Duo Dato:				 	03/14/97		<u> </u>					
	Grid ID: AREA 20A EAST-			Bkgd CPM:				53.0									
	Area: BLDG. 14			Efficiency:				0.23		 							
			K. TESCH 10/17/96		Area Cor Fect:	0.155					N/A		N/A				
	Survey Date: 10/ Smears Counted By:			6	Bkgd CT Time:					1							
	Smear Count Date:				Smpl CT Time: Lc (DPM):				ļ	1							
No.	Description	E (X)	N (y)	Ht. (z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	477 Smpl DPM*	STD DEV	Groes CPM	Smpl	STD	Gross	Sings	STD
1	PIPE					0, 14		DEV	77.0			CPM	DPM*	DEV	CPM	DPM	DEV
2	PIPE	1		1 FT.						673						 	-
3	PIPE	1		2 FT.					111.0	1627	704						
	PIPE	 		3 FT.			 -		86.0	926	648					 	
	PIPE	 		-					94.0	1150	667						
	PIPE .	-		4 FT.			ļ		68.0	<lc 421<="" td=""><td>605</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	605						
	PIPE			5 FT.	F	·····			69.0	<lc 449<="" td=""><td>607</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	607						
	* · · · · · · · · · · · · · · · · · · ·	 		6 FT.					63.0	<lc 281<="" td=""><td>592</td><td></td><td></td><td></td><td></td><td><u> </u></td><td>L</td></lc>	592					<u> </u>	L
	PIPE			7 FT.	•				67.0	<lc 393<="" td=""><td>602</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	602						
	PIPE			8 FT.	•				81.0	785	636						
	PIPE	ļ		9 FT.	•	 			86.0	926	64 8						
	PPE			10 FT.	•				82.0	813	639						
12	PIPE			11 FT.	•				90.0	1038	657						
13	PIPE	ļ		12 FT.	•				80.0	757	634						
14	PIPE			13 FT	•				103.0	1403	687						
15	PIPE			14 FT.	•				105.0	1459	691						
16	PIPE			15 FT.	•				102.0	1374	684						
17	PIPE			16 FT.	•				92.0	1094	662						
18	PIPE			17 FT.	•				96.0	1206	671						
19	PIPE			18 FT.				1	85.0	898	646						
20	PIPE			19 FT.					42.0	<lc -309<="" td=""><td>536</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	536						
21	QC PIPE		t	19 FT.	•				46.0	<lc -196<="" td=""><td>547</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	547						

-	1 10111		
		19/21.	
	Data Entered By and Date: June 1000 01206	// N°	
	Reviewed By and Date(RSSS): [10.1796	Reviewed By and Date (ORPO):	
	10		

FUSRAP Form X-17 (08/19/96) *DPM units per 100 cm2

Page 1 of 2

						Comments: *QC #	20 PIPE, PI	ROBE FACI	NG UP, HO	RIZONTAL F	EADINGS A	T 1 FT. INC	REMTS, U	NABLE TO 1	TAKE ALPH	A NOR ME	ARS IN PAP	: V19
		Direct Surface	and		WeW.			- ·	DIRECT	SURFACE			Surveyo		er Meur	Ethur.	g a factorial and the same of	a si en che littling
					TCJ	Section 1		Alpha		В	eta-Gamm			Alpha		8	ota-Germa	10
DHK.	151 37 3					Scaler Model:				L	udlum 222	1	100	i Kirilda Libbi				*
N	Mary Co	er er er er er er er er er er er er er e				Serial No.:					S9970						***************************************	
S		Reference No.:	12	900976	XLS.	Detector:				LUDLUM 44-9								
4		Survey No.: 129DT032				Serial No.:					S9141							
7						Cal Due Date:					03/14/97							
	,					Bkgd CPM:					53.0							
\sim	,	Area:	1	BLDG.	14	Efficiency:				0.23 0.155				***************************************				
		Survey By:	1	C TESC	CH	Area Cor Fact:								N/A				
		Survey Date:		10/17/9	9 6	Bkgd CT Time:					1							
		Smears Counted By:				Smpl CT Time:					1		· · · · · · · · · · · · · · · · · · ·					
•		Smear Count Date:				Lc (DPM):					477							
	No.	Description	E (X)	N O)	HL (Z)	Field Notes	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	Gross CPM	Smpl DPM*	STD	Gross CPM	Simpli DPM*	STD
	22	PIPE			20 FT.	•				54.0	<lc 28<="" th=""><th>569</th><th></th><th></th><th></th><th></th><th></th><th></th></lc>	569						
	23	PIPE			21 FT.	•				75.0	617	622						
* . [24	PIPE	<u> </u>		22 FT.	•				67.0	<lc 393<="" td=""><td>602</td><td></td><td></td><td></td><td></td><td></td><td></td></lc>	602						

Data Entered By and Date: June 101796
Reviewed By and Date(RSSS): Dyll)

Reviewed By and Date (ORPO):

FUSRAP Form X-17 (08/19/96) *DPM units per 100 cm2 Page 2 of 2

								<u>, :</u>										
	,;				Comments: REAC	leobe u	o 1 re	NCLEN	neuts.	UNABLE	40 4.a	KE ALDI	AGIA AN	SMEAL	s in D	36.	· VW,	
	Dinast Confa				THE STATE OF THE S	PARTOR	HAT THE	DIRECT	SURFAC	EMPLOYER	MICH SH	C HOLDSTON	ATRANSF	ERABLE	CONTAN	WATION		
:1	Direct Surface							2	0.0			i i						
T I	ransferable Contamin	atio	a Sur	vey		Survey	or Sign:	<u>/10el</u>		earl		Surveyo						
Ŧ						-				eta-Gamr		District Control	Alpha		B	eta-Gegu	ne	
=					Scaler Model: Serial No.:		NA			dlum-	2221	-	3 2 1 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2			-1/ %		
合	Reference No.:	1724	009	7% V/	Detector:	 		\		59970	10-6	****	AND A SECTION	THE PERSON NAMED IN				
. 1	Survey No.:			233	Serial No.:	1		}- -	64-9 59141			·	~					
T_	Data Code: これ SUP V				Cal Due Date:	1		\mathcal{I}	 	3/14/91	7	1		$\overline{}$			1	
7	1m nuz.96 Grid ID: BldG 14				Bkgd CPM:					53	l	1		/		· · · · · · · · · · · · · · · · · · ·	-/-	
Ţ	Area: SAREA 20 A EAST			EASt.	Efficiency:				0.23									
μ_	Survey By: M. Tesch				Area Cor Fact:					0.155		N/A			N/A			
1_	Survey Date: 10/17/44				Bkgd CT Time:	(
-₹	ا Smears Counted By: Smear Count Date: طعالاً				Smpl CT Time:	<u> </u>						<u> </u>				•	$-\!\!\!/$	
-	I	E	N	depth	Lc (DPM):	Gross	1	ero.	Cmas	Smale	CTC		C1 -		0			
Ma	Description	æ	m	12)	A Fleid Notes	CPM	DPM*	STD DEV	Gross CPM	Smpl*	STD DEV	Gross CPM	Smpl DPM*	STD DEV	GIDES CPM	Smpl DPM*	STD DEV	
1	Pile		<u> </u>	0	*				77									
12	ıl			14					111									
3				254					86			/						
4				361					94			1/			1		 	
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8			•	756		1			67									
9				378		1			81		<u></u>			1				
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13				12FL				\mathcal{I}	80									
14				13 FL					103									
15				1464					105									
16	•			15 FL					102									
17	.		l	16 FL					92					1				
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21	æ V		l	19F+			r		46						<u> </u>			

Data	Entered	Ву	and	Date	•		
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	•					Comments: REA	gings of ob	in 1f	t inc	LEMEN.	ts. Un	able t	o take	Alpha	NOW S	HEARS	in Pite	V 1.9
		Direct Surface	ce aud				CAMPIN SAN	Maria Santana	O	SURFAC		Salsko (Caran)	SECTION S	*IRANSF	ERABLE	CONTAL	MHATION	
-2	rans	ferable Contam	inatio	n Sui	rvev		Survey	or Sign:	Ka	$\mathcal{Q}\mathcal{D}$ (2 rec	ΥĎ	Surveyo					
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